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SCHEDULES 12-22

Moody's Global Infrastructure

# Industry Outlook

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# U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

The outlook for the U.S. investor-owned electric utility sector is stable. This outlook expresses Moody's expectations for the fundamental credit conditions in the industry over the next 12 to 18 months. Over the intermediate- to longer-term horizon, material risks continue to congregate.

- State regulatory authorities continue to authorize timely regulatory relief for prudently incurred costs and investments, a primary driver behind our stable outlook.
- Sector financial profile remains relatively steady — as measured by most key cash flow-related credit metrics — but an increasing business and operating risk profile will need to be mitigated by stronger balance sheets and cash flow-related credit metrics for many companies in order to avoid longer-term credit deterioration.
- Material business and operating risks lurk on the horizon, the most important of which include:
  - Regulatory overhang: Rising concerns over the pace and amount of requests for financial relief, many of which are attributed to rising commodity prices and other legislatively mandated obligations beyond the control of management;
  - Market intervention: Uncertainty over consumer tolerance for steadily increasing rates before a backlash erupts on the legislative front; and
  - Corporate financing strategy: Current reluctance on the part of many management teams to issue equity and / or finance substantial negative free cash flow positions with a more balanced allocation of debt and equity. Nevertheless, access to capital has not appeared to be an issue with the sector over the past several months.
- Proposed environmental legislation regarding carbon emissions represents a material long-term credit risk due to uncertainty over the framework and timeframe associated with implementation.

U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

# Overview

The U.S. investor-owned electric utility sector enjoys solid credit metrics and the fundamental credit outlook remains stable. Most state regulators continue to grant reasonably timely recovery of prudently incurred operating costs and capital expenditures at a reasonable rate of return.

But pressures are building. Utilities are facing rising operating costs and infrastructure investment needs that are prompting them to seek more-frequent requests for rate relief. Meanwhile, as energy (and other commodity) costs rise, so does the risk of a consumer backlash over electric rates that could prompt legislative intervention or a more contentious atmosphere between utilities and their regulators. In addition, the prospect of carbon-emissions legislation remains a significant unknown with potential long-term credit implications.

# Key Trends and Rating Implications

## What's Changed

### Number and pace of requests for rate relief increasing

Utilities are making more frequent requests for financial relief although the percentage increases sought in those requests are expected to be lower. Utilities appear to be positioning themselves to ask their regulators for rate relief more frequently in an attempt to more closely tie their cash inflows to their cash outflows.

While we continue to incorporate a view that these requests will be granted in a relatively timely manner, we remain concerned that at some point, consumers and / or elected officials will reach a threshold tolerance level where absorbing incremental rate increases may become problematic. Should this scenario materialize, we believe the risk of additional market intervention by state legislatures may increase or the relative supportiveness of regulators for additional infrastructure investments may begin to wane. If the regulatory framework begins to take on a more contentious tone, we would consider that to be a material credit negative.

Currently, the regulated nature of the U.S. investor-owned electric utility sector's business activities represents a significant positive credit driver. In our opinion, most state regulatory authorities continue to provide reasonably timely recovery of prudently incurred operating costs and infrastructure investments at a reasonable return. In addition, we incorporate a view that state regulators would otherwise prefer to regulate financially healthy utilities – as they are better positioned to invest in the local infrastructure and maintain high reliability standards – a key priority for the regulatory authorities and elected officials within a given region.

## Fundamentals

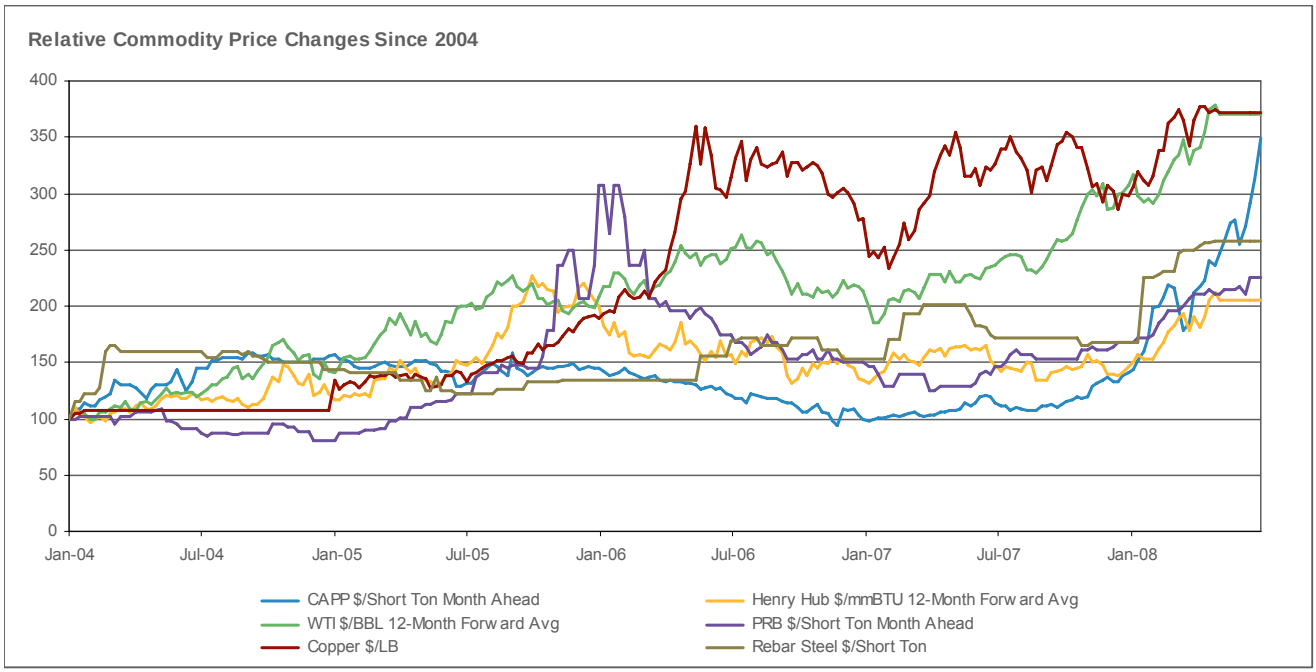
### Rising pass-through costs could pressure other base-rate requests

Although the regulatory framework remains relatively supportive to the long-term financial health of the sector, concerns are rising related to the significant operating cost pressures associated with rising fuel and purchased power expenses, rising operating and maintenance (O&M) expenses, an aging labor force and other legislatively mandated expenses that will serve to increase all-in consumer rates (for example, renewable portfolio standards).

Many of these rising costs, most notably fuel and purchased power, are collected by utilities through fuel clauses or other direct pass-through mechanisms, without providing any profit or margin opportunities to the utility. As these costs rise, and rates are adjusted upwards, the total percentage of a consumer's bill comprised of pass-through costs may become somewhat skewed, which could lead to political pressure to limit other, base-rate requests for financial relief. This scenario could increase the risk of market intervention by elected officials and / or regulatory authorities. In our opinion, this scenario could be exacerbated by the current commodity markets, where significantly higher oil and natural gas prices may result in material increases to consumer bills.

# U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

***Chart A:***




*Source: Bloomberg*

Moody's defines intervention as any legislatively mandated modification, amendment, revision or adjustment to the traditional electric market framework, which can be viewed as either a credit positive or credit negative. We observe that there has been recent intervention activity in Ohio, which was completed in a reasonably collaborative manner among the utilities, large industrials, consumer advocates and regulatory authorities. Intervention in Pennsylvania and Michigan also appear to be moving toward a resolution intended to lessen potentially adverse consequences to the sector and some modest intervention is currently underway in Texas. Over the longer term, we remain cautious with respect to many of the states that had previously attempted some forms of market restructuring, especially those in the Northeast and Mid-Atlantic regions, where new capacity payment obligations are creating incremental all-in rate pressures and several states are beginning to object to the size and scope of these payments.

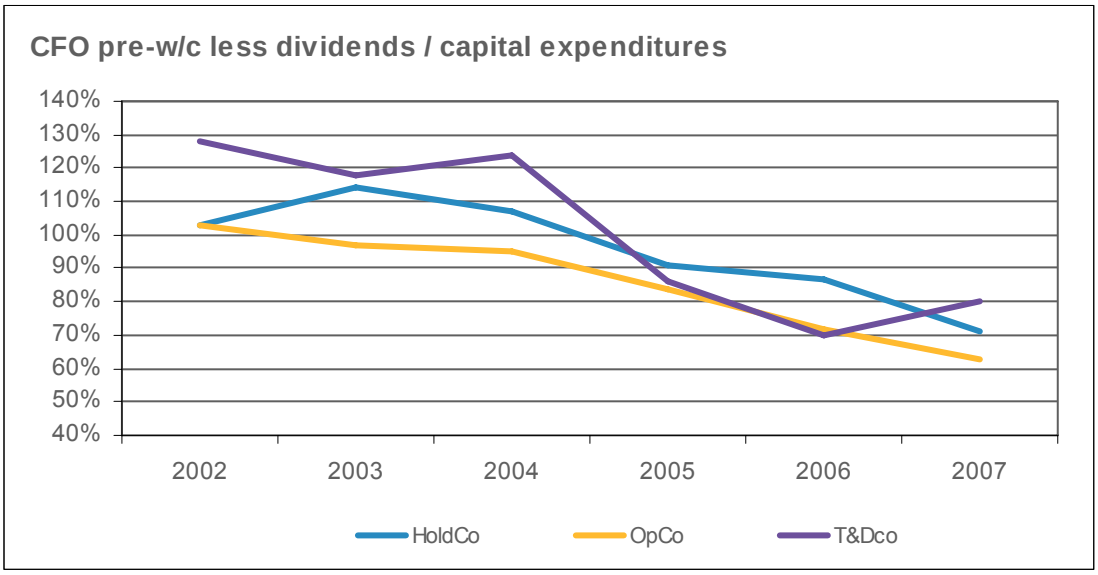
## Aged infrastructure raises need for capital spending, investment plans

The sector is expected to invest heavily in its rate base and infrastructure over the next several years. However, many of the most expensive projects are very long term. Companies are beginning to highlight that their commitment to making these investments will be premised on some advanced regulatory support or acknowledgement that the investments will be deemed necessary. We view pre-approvals and other up-front regulatory supportiveness as a material credit positive, as it tends to decrease (but not eliminate) the risk for back-end regulatory disallowances.

The manner in which utilities manage these increasing cash outflows and the success they have in attaining regulatory relief will be a major factor in assessing credit ratings over the longer-term horizon. In the chart below, we show the historical trend of the internally generated funds in relation to capital expenditures, as measured by cash flow from operations before working capital adjustments (CFO pre-w/c) less dividends divided by capital expenditures. As can be seen in the chart, the ratio has moved quickly below 100%, and is expected to decline even further over the next few years, a significant credit negative. For illustrative analytical purposes, we segregated the sector into its parent holding companies (HoldCos), vertically integrated electric utilities (OpCos) and transmission and distribution utilities (T&DCos). For a list of the companies included in these peer indexes, please refer to Appendix A.

## U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

***Chart B:***




Over the next few years, these ratios are expected to decline even further, and we observe that many companies in the sector are seriously considering engaging in the construction of new nuclear generating capacity – a long term commitment that could be very costly. Recently, several utilities, including Georgia Power and South Carolina Electric and Gas, have announced agreements with their respective vendors to pursue a new build program, where all-in prices are in the general vicinity of $6,000 / kw capacity level and both appear to have very strong regulatory and political support for the investment. In a separate action, the Department of Energy recently released its solicitation procedures with respect to Federal loan guarantees for nuclear power facilities. The pursuit of new nuclear generating capacity could put significant pressure on the sector's overall capital investment plans and utilities that pursue these projects will most likely be ascribed a higher business and operating risk profile.

### Key metrics relatively stable amid rising operating costs, investment needs

The key financial credit metrics for the sector remain relatively steady, but may need to improve given the increasing operating cost profile and infrastructure investment needs across the industry and evidence that regulatory relief is occurring in a reasonably timely manner.

In our opinion, the relationship between a utility's cash flow generating capabilities and its total adjusted debt outstanding is a more important element in assessing financial health than authorized returns on equity (ROEs). However, authorized and realized ROEs are a critical component to net income, which, in turn, is a critical component to cash flow, and we observe that the authorized ROEs for the sector have been falling steadily, albeit modestly, over the past few years. While regulators may argue that the overall risk of the sector is declining, partly as a function of pre-approvals for investment and the pass-through riders associated with many costs, the sector is entering a major period of capital-raising needs, and will need to attract a significant amount of new equity capital in order to maintain existing ratings. On the positive side, utilities continue to enjoy relatively consistent access to capital, liquidity remains adequate and, as noted previously, the overall financial profile has remained relatively steady over the recent past. In the table below, Moody's shows the relative stability of the sector from a pure cash flow from operations (CFO), CFO before working capital adjustments (CFO pre-w/c) and funds from operations (FFO) perspective.

## U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

***Table 1:***

| | Actual As Ajusted (Moody's FM) | | | | | | Average | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 5-year ('03 - '07) | 3-year ('05 - '07) | LTM Mar-08 |
| **CFO / Debt** | | | | | | | | | |
| HoldCo | 16% | 17% | 18% | 17% | 19% | 19% | 18% | 18% | 19% |
| OpCo | 27% | 26% | 27% | 21% | 27% | 23% | 25% | 24% | 23% |
| T&DCo | 21% | 20% | 23% | 22% | 18% | 19% | 20% | 20% | 20% |
| **FFO / Debt** | | | | | | | | | |
| HoldCo | 17% | 19% | 19% | 19% | 21% | 21% | 20% | 21% | 21% |
| OpCo | 28% | 28% | 28% | 26% | 26% | 25% | 27% | 26% | 25% |
| T&DCo | 23% | 22% | 28% | 25% | 20% | 23% | 24% | 23% | 24% |
| **CFO pre-w/c / Debt** | | | | | | | | | |
| HoldCo | 16% | 19% | 18% | 18% | 21% | 21% | 19% | 20% | 20% |
| OpCo | 28% | 28% | 27% | 24% | 25% | 24% | 26% | 25% | 24% |
| T&DCo | 21% | 21% | 24% | 22% | 18% | 22% | 22% | 21% | 23% |

*SOURCE: Moody's FM*

# Emerging Issues

## Pending environmental legislation

In our opinion, the prospect for new environmental emission legislation, via federal or state carbon emission rules, represents the single-biggest emerging issue on the horizon, due to the sheer volume of the sector's carbon dioxide emissions and the uncertainty surrounding the form and substance of the potential legislation. In general, Moody's remains indifferent as to which carbon emission reduction method is ultimately adopted, whether it be a straight tax regime or a "cap and trade" system. From a credit perspective, we believe the "cap and trade" system would be more complex, less transparent and likely to produce non-recurring profits for many companies. In addition, the potential costs associated with the "cap and trade" system may be less certain than a straight tax approach.

At this time, Moody's incorporates a view that the costs associated with any new legislation regarding emissions will generally be recovered through rates, either through existing fuel clause pass-through mechanisms or other incremental rate riders. We also incorporate a view that the timing of compliance requirements within any potential new legislation will be many years in the future. We observe that the framework behind such legislation is still being developed, is subject to a material amount of political influence and that numerous advocacy groups (including electric utilities) will have a significant amount of input into the drafting of the regulatory procedures associated with implementation.

We view the adoption of emission legislation as a potential credit negative. Although the costs are expected to ultimately be borne by end-use consumers, a credit neutral impact, the potential for regulators to limit other base-rate relief may increase, a credit negative. While Moody's acknowledges that a substantial amount of uncertainty exists at this time, we incorporate a view that management teams will proactively adjust their corporate finance policies, strengthen their balance sheets and bolster their available liquidity capacity at the front end of the implementation cycle to address and prepare for these potential uncertainties – in a manner that is consistent with the sector's perceived conservatism.

U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

## Conclusion

Moody's continues to incorporate a view that the fundamentals underlying the U.S. investor-owned utility sector remain intact – the most important of which is the relative supportiveness of the regulatory environment. The maturity of the sector and its infrastructure, asset base and, more importantly, the engineering behind its operations, continue to produce an extremely high amount of electric reliability in a safe and efficient manner. In our opinion, maintaining safe reliability is one of the most important issues for state regulatory authorities.

At the same time, the sector is currently facing material issues, such as the need to replace aging infrastructure and the potential for new carbon emission legislation, which can have a significant impact on overall credit quality. These issues are longer-term in nature, providing ample time to revise, adjust and / or amend corporate finance policies and long-term corporate strategies well in advance of changing market conditions.

U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

# Moody's Related Research

## Rating Methodologies:

- North American Diversified Natural Gas Transmission And Distribution Companies, March 2007 (102513)
- North American Natural Gas Pipelines, December 2006 (101229)
- North American Regulated Gas Distribution Industry (Local Distribution Companies), October 2006 (99282)
- U.S. Electric Generation & Transmission Cooperatives, May 2006 (97324)
- Global Regulated Electric Utilities, March 2005 (91730)

## Industry Outlooks:

- North American Natural Gas Transmission & Distribution: Six-Month Industry Update, March 2008 (108212)
- U.S. Electric Utility Sector, January 2008 (107004)
- US Coal Industry Outlook – 2008, October 2007 (105372)
- North American Natural Gas Transmission & Distribution, September 2007 (104854)
- U.S. Electric Utilities, December 2006 (101304)

## Special Comments:

- New Nuclear Generating Capacity: Potential Credit Implications for U.S. Investor Owned Utilities, May 2008 (109152)
- EU Climate Change Strategy, May 2008 (108846)
- Decommissioning and Waste Costs for New Generation of Nuclear Power Structures, May 2008 (109086)
- Credit Challenges Ahead For Public Power: Difficult Decisions on New Generation Capacity, November 2007 (105997)
- New Nuclear Generation in the United States: Keeping Options Open vs. Addressing An Inevitable Necessity, October 2007 (104977)
- Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector, August 2007 (103941)
- Environmental Regulations Increase Capital Costs for Public Power Electric Utilities, June 2007 (103616)
- Regulation Of Greenhouse Gases: Substantial Credit Challenges Likely Ahead For U.S. Public Power Electric Utilities, June 2007 (103356)
- Regulatory Pressures Increase For U.S. Electric Utilities, March 2007 (102322)
- Moody's Comments on the Back to Basics Strategy for the North American Electric Utility Sector, November 2006 (100660)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

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# Appendix A

| | | CFO pre-w/c / Debt | | | |
|---|---|---|---|---|---|
| | | Average | | | |
| Holding Companies (HoldCo's) | Sr. Unsec. or Equilv. | 5-year ('03 - '07) | 3-year ('05 - '07) | Actual 2007 | LTM Mar-08 |
| Allegheny Energy, Inc. | Ba1 | 13% | 18% | 22% | 23% |
| Alliant Energy Corporation | | 24% | 25% | 29% | 37% |
| Ameren Corporation | Baa2 | 22% | 22% | 19% | 19% |
| American Electric Power Company | Baa2 | 16% | 16% | 16% | 17% |
| Cleco Corporation | Baa3 | 26% | 29% | 32% | 30% |
| CMS Energy Corporation | Ba1 | 9% | 12% | 10% | 7% |
| Constellation Energy Group, Inc. | Baa1 | 24% | 25% | 26% | 25% |
| Dominion Resources Inc. | Baa2 | 14% | 11% | -3% | -4% |
| DTE Energy Company | Baa2 | 14% | 15% | 11% | 15% |
| Duke Energy Corporation | Baa2 | 25% | 25% | 35% | 29% |
| Edison International | Baa2 | 27% | 31% | 30% | 29% |
| Entergy Corporation | Baa3 | 30% | 25% | 27% | 26% |
| Exelon Corporation | Baa1 | 29% | 30% | 39% | 36% |
| FirstEnergy Corp. | Baa3 | 16% | 17% | 14% | 16% |
| FPL Group, Inc. | A2 | 22% | 22% | 26% | 23% |
| Great Plains Energy Incorporated | Baa2 | 28% | 29% | 24% | 21% |
| MidAmerican Energy Holdings Co. | Baa1 | 11% | 11% | 12% | 12% |
| OGE Energy Corp. | Baa1 | 25% | 26% | 18% | 11% |
| Pepco Holdings, Inc. | Baa3 | 13% | 13% | 14% | 16% |
| PG&E Corporation | Baa1 | 32% | 25% | 29% | 30% |
| Pinnacle West Capital Corporation | Baa3 | 20% | 20% | 20% | 20% |
| PNM Resources, Inc. | Ba2 | 15% | 9% | 11% | 9% |
| PPL Corporation | Baa2 | 20% | 21% | 23% | 21% |
| Progress Energy, Inc. | Baa2 | 16% | 16% | 16% | 13% |
| Public Service Enterprise Group | Baa2 | 15% | 16% | 21% | 24% |
| Puget Energy, Inc. | Ba1 | 15% | 13% | 17% | 19% |
| SCANA Corporation | Baa1 | 20% | 21% | 21% | 21% |
| Sempra Energy | Baa1 | 30% | 33% | 37% | 34% |
| Sierra Pacific Resources | Ba3 | 10% | 13% | 17% | 17% |
| Southern Company (The) | A3 | 22% | 22% | 20% | 19% |
| TECO Energy, Inc. | Baa3 | 9% | 13% | 18% | 18% |
| UniSource Energy Corporation | Ba1* | 15% | 16% | 18% | 17% |
| Westar Energy, Inc. | Baa3 | 18% | 20% | 19% | 17% |
| Wisconsin Energy Corporation | A3 | 17% | 17% | 18% | 20% |
| Xcel Energy Inc. | Baa1 | 20% | 20% | 21% | 21% |

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## U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

| | | CFO pre-w/c / Debt | | | |
|---|---|---|---|---|---|
| | | Average | | | |
| Vertically Integrated Utilities (OpCos) | Sr. Unsec. or Equilv. | 5-year ('03 - '07) | 3-year ('05 - '07) | Actual 2007 | LTM Mar-08 |
| Alabama Power Company | A2 | 24% | 22% | 21% | 21% |
| Appalachian Power Company | Baa2 | 17% | 12% | 13% | 9% |
| Arizona Public Service Company | Baa2 | 21% | 21% | 22% | 23% |
| Cleco Power LLC | Baa1 | 25% | 22% | 17% | 18% |
| Columbus Southern Power Company | A3 | 28% | 25% | 29% | 33% |
| Consumers Energy Company | Baa2 | 16% | 18% | 17% | 17% |
| Dayton Power & Light Company | A3 | 48% | 46% | 41% | 42% |
| Detroit Edison Company (The) | Baa1 | 19% | 20% | 16% | 19% |
| Duke Energy Carolinas, LLC | A3 | 25% | 29% | 34% | 28% |
| Duke Energy Indiana, Inc. | Baa1 | 20% | 21% | 22% | 21% |
| Duke Energy Ohio, Inc. | Baa1 | 29% | 29% | 33% | 36% |
| Entergy Arkansas, Inc. | Baa2 | 33% | 32% | 34% | 31% |
| Entergy Gulf States Louisiana | Baa3 | 18% | 16% | 23% | 24% |
| Entergy Louisiana, LLC | Baa2 | 27% | 24% | 29% | 20% |
| Entergy Mississippi, Inc. | Baa3 | 25% | 25% | 32% | 33% |
| Florida Power & Light Company | A1 | 38% | 35% | 37% | 35% |
| Georgia Power Company | A2 | 24% | 23% | 20% | 20% |
| Green Mountain Power Corporation | A3* | 25% | 24% | N/A | N/A |
| Gulf Power Company | A2 | 27% | 27% | 25% | 26% |
| Hawaiian Electric Company, Inc. | Baa1 | 22% | 22% | 21% | 21% |
| Idaho Power Company | Baa1 | 15% | 12% | 8% | 7% |
| Indiana Michigan Power Company | Baa2 | 27% | 27% | 28% | 31% |
| Indianapolis Power & Light Company | Baa2 | 33% | 32% | 32% | N/A |
| Interstate Power and Light Company | A3 | 33% | 33% | 40% | 36% |
| Kansas City Power & Light Company | A3 | 29% | 32% | 29% | 24% |
| Kansas Gas & Electric Co. | Baa2* | 33% | 34% | 29% | N/A |
| Kentucky Power Company | Baa2 | 17% | 16% | 19% | 17% |
| Kentucky Utilities Co. | A2 | 28% | 26% | 24% | N/A |
| Louisville Gas & Electric Company | A2 | 23% | 23% | 18% | N/A |
| Madison Gas and Electric Company | Aa3 | 29% | 28% | 27% | 30% |
| MidAmerican Energy Company | A2 | 32% | 28% | 24% | 24% |
| Mississippi Power Company | A1 | 48% | 43% | 54% | 38% |
| Monongahela Power Company | Baa3 | 15% | 20% | 12% | N/A |
| Nevada Power Company | Ba3 | 14% | 17% | 23% | 23% |
| Northern States Power Company (MN) | A3 | 29% | 28% | 29% | 29% |
| Northern States Power Company (WI) | A3 | 26% | 24% | 25% | 32% |
| Ohio Power Company | A3 | 22% | 20% | 20% | 21% |
| Oklahoma Gas & Electric Company | A2 | 29% | 25% | 21% | 17% |
| Pacific Gas & Electric Company | A3 | 32% | 25% | 30% | 31% |
| PacifiCorp | Baa1 | 20% | 19% | 18% | 19% |

## U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

| | | CFO pre-w/c / Debt | | | |
|---|---|---|---|---|---|
| | | Average | | | |
| Vertically Integrated Utilities (OpCos) | Sr. Unsec. or Equilv. | 5-year ('03 - '07) | 3-year ('05 - '07) | Actual 2007 | LTM Mar-08 |
| Portland General Electric Company | Baa2 | 30% | 27% | 24% | 26% |
| Progress Energy Carolinas, Inc. | A3 | 31% | 29% | 32% | 31% |
| Progress Energy Florida, Inc. | A3 | 24% | 27% | 21% | 18% |
| Public Service Company of Colorado | Baa1 | 22% | 22% | 24% | 28% |
| Public Service Company of New Mexico | Baa3 | 17% | 13% | 13% | 12% |
| Public Service Company of Oklahoma | Baa1 | 20% | 17% | 7% | 8% |
| Puget Sound Energy, Inc. | Baa3 | 15% | 13% | 17% | 19% |
| Sierra Pacific Power Company | Ba3 | 13% | 17% | 15% | 16% |
| South Carolina Electric & Gas Co | A3 | 24% | 26% | 25% | 25% |
| Southern California Edison Company | A3 | 48% | 48% | 50% | 47% |
| Southwestern Electric Power Company | Baa1 | 25% | 23% | 17% | 12% |
| Southwestern Public Service Company | Baa1 | 18% | 16% | 14% | 14% |
| Tampa Electric Company | Baa2 | 24% | 23% | 25% | 26% |
| Tucson Electric Power Company | Baa3 | 16% | 18% | 19% | 18% |
| Union Electric Company | Baa2 | 27% | 24% | 21% | 20% |
| Virginia Electric and Power Company | Baa1 | 22% | 21% | 19% | 18% |
| Wisconsin Electric Power Company | A1 | 26% | 22% | 18% | 12% |
| Wisconsin Power and Light Company | A2 | 37% | 29% | 30% | 29% |
| Wisconsin Public Service Corporation | A1 | 30% | 26% | 21% | 23% |

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## U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

| | | CFO pre-w/c / Debt | | | |
|---|---|---|---|---|---|
| | | Average | | | |
| Transmission & Distribution Utilities (T&D cos) | Sr. Unsec. or Equilv. | 5-year ('03 - '07) | 3-year ('05 - '07) | Actual 2007 | LTM Mar-08 |
| AEP Texas Central Company | Baa2 | 6% | 3% | 1% | 4% |
| AEP Texas North Company | Baa1 | 26% | 26% | N/A | 26% |
| Atlantic City Electric Company | Baa1 | 17% | 19% | 21% | 25% |
| Baltimore Gas and Electric Company | Baa2 | 18% | 14% | 8% | 18% |
| CenterPoint Energy Houston Electric | Baa3 | 13% | 15% | 17% | 15% |
| Central Hudson Gas & Electric Co | A2 | 20% | 16% | 15% | 16% |
| Central Illinois Light Company | Ba1 | 34% | 36% | 30% | 30% |
| Central Illinois Public Service | Ba1 | 15% | 16% | 10% | 9% |
| Central Maine Power Company | A3 | 22% | 21% | 23% | 22% |
| Cleveland Electric Illuminating | Baa3 | 10% | 8% | -4% | 0% |
| Commonwealth Edison Company | Ba1 | 17% | 15% | 14% | 14% |
| Connecticut Light and Power Company | Baa1 | 13% | 12% | 16% | 15% |
| Consolidated Edison Company of NY | A1 | 19% | 16% | 14% | 16% |
| Delmarva Power & Light Company | Baa2 | 18% | 14% | 14% | 19% |
| Duquesne Light Company | Baa2 | 25% | 30% | 56% | N/A |
| Illinois Power Company | Ba1 | 16% | 14% | 11% | 10% |
| Jersey Central Power & Light Company | Baa2 | 20% | 20% | 23% | 26% |
| Metropolitan Edison Company | Baa2 | 14% | 12% | 11% | 11% |
| New York State Electric and Gas | Baa1 | 23% | 23% | 18% | 15% |
| Niagara Mohawk Power Corporation | A3 | 21% | 25% | N/A | N/A |
| NSTAR Electric Company | A1 | 18% | 14% | 18% | 19% |
| Ohio Edison Company | Baa2 | 32% | 27% | 15% | 18% |
| Oncor Electric Delivery Company | Ba1 | 17% | 17% | 16% | 16% |
| Orange and Rockland Utilities | A2 | 27% | 19% | N/A | N/A |
| PECO Energy Company | A3 | 22% | 25% | 30% | 29% |
| Pennsylvania Electric Company | Baa2 | 12% | 12% | 11% | 12% |
| Pennsylvania Power Co. | Baa2 | 48% | 38% | 28% | N/A |
| Potomac Edison Company (The) | Baa3 | 18% | 15% | -2% | N/A |
| Potomac Electric Power Company | Baa2 | 24% | 29% | 47% | 49% |
| PPL Electric Utilities Corporation | Baa1 | 25% | 30% | 38% | 39% |
| Public Service Electric and Gas | Baa1 | 14% | 15% | 16% | 17% |
| Rochester Gas & Electric Corporation | Baa1 | 22% | 23% | 24% | 23% |
| San Diego Gas & Electric Company | A2 | 39% | 34% | 31% | 30% |
| Texas-New Mexico Power Company | Baa3 | 14% | 11% | 13% | 14% |
| Toledo Edison Company | Baa3 | 58% | 75% | 132% | 139% |
| United Illuminating Company | Baa2 | 22% | 21% | 19% | N/A |
| West Penn Power Company | Baa3 | 29% | 26% | 25% | N/A |
| Western Massachusetts Electric | Baa2 | 12% | 9% | 20% | 19% |

# U.S. Investor-Owned Electric Utilities: Six-Month Industry Update

Report Number: 109675


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# "Buy Versus Build": Debt Aspects of Purchased-Power Agreements

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# "Buy Versus Build": Debt Aspects of Purchased-Power Agreements

Standard & Poor's Ratings Services views electric utility purchased-power agreements (PPA) as debt-like in nature, and has historically capitalized these obligations on a sliding scale known as a "risk spectrum." Standard & Poor's applies a 0% to 100% "risk factor" to the net present value (NPV) of the PPA capacity payments, and designates this amount as the debt equivalent.

While determination of the appropriate risk factor takes several variables into consideration, including the economics of the power and regulatory treatment, the overwhelming factor in selecting a risk factor has been a distinction in the likelihood of payment by the buyer. Specifically, Standard & Poor's has divided the PPA universe into two broad categories: take-or-pay contracts (TOP; hell or high water) and take-and-pay contracts (TAP; performance based). To date, TAP contracts have been treated far more leniently (e.g., a lower risk factor is applied) than TOP contracts since failure of the seller to deliver energy, or perform, results in an attendant reduction in payment by the buyer. Thus, TAP contracts were deemed substantially less debt-like. In fact, the risk factor used for many TAP obligations has been as low as 5% or 10% as opposed to TOPs, which have been typically at least 50%.

Standard & Poor's originally published its purchased-power criteria in 1990, and updated it in 1993. Over the past decade, the industry underwent significant changes related to deregulation and acquired a history with regard to the performance and reliability of third-party generators. In general, independent generation has performed well; the likelihood of nondelivery--and thus release from the payment obligation--is low. As a result, Standard & Poor's believes that the distinction between TOPs and TAPs is minimal, the result being that the risk factor for TAPs will become more stringent. This article reiterates Standard & Poor's views on purchased power as a fixed obligation, how to quantify this risk, and the credit ramifications of purchasing power in light of updated observations.

## Why Capitalize PPAs?

Standard & Poor's evaluates the benefits and risks of purchased power by adjusting a purchasing utility's reported financial statements to allow for more meaningful comparisons with utilities that build generation. Utilities that build typically finance construction with a mix of debt and equity. A utility that leases a power plant has entered into a debt transaction for that facility; a capital lease appears on the utility's balance sheet as debt. A PPA is a similar fixed commitment. When a utility enters into a long-term PPA with a fixed-cost component, it takes on financial risk. Furthermore, utilities are typically not financially compensated for the risks they assume in purchasing power, as purchased power is usually recovered dollar-for-dollar as an operating expense.

As electricity deregulation has progressed in some countries, states, and regions, the line has blurred between traditional utilities, vertically integrated utilities, and merchant energy companies, all of which are in the generation business. A common contract that has emerged is the tolling agreement, which gives an energy merchant company the right to purchase power from a specific power plant. (see "Evaluating Debt Aspects of Power Tolling Agreements," published Aug. 26, 2002). The energy merchant, or toller, is typically responsible for procuring and delivering gas to the plant when it wants the plant to generate power. The power plant operator must maintain plant availability and produce electricity at a contractual heat rate. Thus, tolling contracts exhibit characteristics of both PPAs and leases. However, tollers are typically unregulated entities competing in a competitive marketplace.

Standard & Poor's has determined that a 70% risk factor should be applied to the NPV of the fixed tolling payments, reflecting its assessment of the risks borne by the toller, which are:

- Fixed payments that cover debt financing of power plant (typically highly leveraged at about 70%),
- Commodity price of inputs,
- Energy sales (price and volume), and
- Counterparty risk.

## Determining the Risk Factor for PPAs

Alternatively, most entities entering into long-term PPAs, as an alternative to building and owning power plants, continue to be regulated utilities. Observations over time indicate the high likelihood of performance on TAP commitments and, thus, the high likelihood that utilities must make fixed payments. However, Standard & Poor's believes that vertically integrated, regulated utilities are afforded greater protection in the recovery of PPAs, compared with the recovery of fixed tolling charges by merchant generators. There are two reasons for this. First, tariffs are typically set by regulators to recover costs. Second, most vertically integrated utilities continue to have captive customers and an obligation to serve. At a minimum, purchased power, similar to capital costs and fuel costs, is included in tariffs as a cost of service.

As a generic guideline for utilities with PPAs included as an operating expense in base tariffs, Standard & Poor's believes that a 50% risk factor is appropriate for long-term commitments (e.g. tenors greater than three years). This risk factor assumes adequate regulatory treatment, including recognition of the PPA in tariffs; otherwise a higher risk factor could be adopted to indicate greater risk of recovery. Standard & Poor's will apply a 50% risk factor to the capacity component of both TAP and TOP PPAs. Where the capacity component is not broken out separately, we will assume that 50% of the payment is the capacity payment. Furthermore, Standard & Poor's will take counterparty risk into account when considering the risk factor. If a utility relies on any individual seller for a material portion of its energy needs, the risk of nondelivery will be assessed. To the extent that energy is not delivered, the utility will be exposed to replacing this power, potentially at market rates that could be higher than contracted rates and potentially not recoverable in tariffs.

Standard & Poor's continues to view the recovery of purchased-power costs via a fuel-adjustment clause, as opposed to base tariffs, as a material risk mitigant. A monthly or quarterly adjustment mechanism would ensure dollar-for-dollar recovery of fixed payments without having to receive approval from regulators for changes in fuel costs. This is superior to base tariff treatment, where variations in volume sales could result in under-recovery if demand is sluggish or contracting. For utilities in supportive regulatory jurisdictions with a precedent for timely and full cost recovery of fuel and purchased-power costs, a risk factor of as low as 30% could be used. In certain cases, Standard & Poor's may consider a lower risk factor of 10% to 20% for distribution utilities where recovery of certain costs, including stranded assets, has been legislated. Qualifying facilities that are blessed by overarching federal legislation may also fall into this category. This situation would be more typical of a utility that is transitioning from a vertically integrated to a disaggregated distribution company. Still, it is unlikely that no portion of a PPA would be capitalized (zero risk factor) under any circumstances.

The previous scenarios address how purchased power is quantified for a vertically integrated utility with a bundled tariff. However, as the industry transitions to disaggregation and deregulation, various hybrid models have emerged. For example, a utility can have a deregulated merchant energy subsidiary, which buys power and off-sells it to the

regulated utility. The utility in turn passes this power through to customers via a fuel-adjustment mechanism. For the merchant entity, a 70% risk factor would likely be applied to such a TAP or tolling scheme. But for the utility, a 30% risk factor would be used. What would be the appropriate treatment here? In part, the decision would be driven by the ratings methodology for the family of companies. Starting from a consolidated perspective, Standard & Poor's would use a 30% risk factor to calculate one debt equivalent on the consolidated balance sheet given that for the consolidated entity the risk of recovery would ultimately be through the utility's tariff. However, if the merchant energy company were deemed noncore and its rating was more a reflection of its stand-alone creditworthiness, Standard & Poor's would impute a debt equivalent using a 70% risk factor to its balance sheet, as well as a 30% risk-adjusted debt equivalent to the utility. Indeed, this is how the purchases would be reflected for both companies if there were no ownership relationship. This example is perhaps overly simplistic because there will be many variations on this theme. However, Standard & Poor's will apply this logic as a starting point, and modify the analysis case-by-case, commensurate with the risk to the various participants.

## Adjusting Financial Ratios

Standard & Poor's begins by taking the NPV of the annual capacity payments over the life of the contract. The rationale for not capitalizing the energy component, even though it is also a nondiscretionary fixed payment, is to equate the comparison between utilities that buy versus build--i.e., Standard & Poor's does not capitalize utility fuel contracts. In cases where the capacity and energy components of the fixed payment are not specified, half of the fixed payment is used as a proxy for the capacity payment. The discount rate is 10%. To determine the debt equivalent, the NPV is multiplied by the risk factor. The resulting amount is added to a utility's reported debt to calculate adjusted debt. Similarly, Standard & Poor's imputes an associated interest expense equivalent of 10%--10% of the debt equivalent is added to reported interest expense to calculate adjusted interest coverage ratios. Key ratios affected include debt as a percentage of total capital, funds from operations (FFO) to debt, pretax interest coverage, and FFO interest coverage. Clearly, the higher the risk factor, the greater the effect on adjusted financial ratios. When analyzing forecasts, the NPV of the PPA will typically decrease as the maturity of the contract approaches.

## Utility Company Example

To illustrate some of the financial adjustments, consider the simple example of ABC Utility Co. buying power from XYZ Independent Power Co. Under the terms of the contract, annual payments made by ABC Utility start at $90 million in 2003 and rise 5% per year through the contract's expiration in 2023. The NPV of these obligations over the life of the contract discounted at 10% is $1.09 billion. In ABC's case, Standard & Poor's chose a 30% risk factor, which when multiplied by the obligation results in $327 million. Table 1 illustrates the adjustment to ABC's capital structure, where the $327 million debt equivalent is added as debt, causing ABC's total debt to capitalization to rise to 59% from 54% (11 plus 48). Table 2 shows that ABC's pretax interest coverage was 2.6x, without adjusting for off-balance-sheet obligations. To adjust for the XYZ capacity payments, the $327 million debt adjustment is multiplied by a 10% interest rate to arrive at about $33 million. When this amount is added to both the numerator and the denominator, adjusted pretax interest coverage falls to 2.3x.

**Table 1**

**ABC Utility Co. Adjustment to Capital Structure**

| | Original capital structure | | Adjusted capital structure | |
|---|---|---|---|---|
| | $ | % | $ | % |
| Debt | 1,400 | 54 | 1,400 | 48 |
| Adjustment to debt | - | - | 327 | 11 |
| Preferred stock | 200 | 8 | 200 | 7 |
| Common equity | 1,000 | 38 | 1,000 | 34 |
| Total capitalization | 2,600 | 100 | 2,927 | 100 |

**Table 2**

**ABC Utility Co. Adjustment to Pretax Interest Coverage**

| | | Original pretax interest coverage (x) | | Adjusted pretax interest coverage (x) | |
|---|---|---|---|---|---|
| Net income | 120 | | | | |
| Income taxes | 65 | 300 | | (300+33) | |
| Interest expense | 115 | 115 | = 2.6x | (115+33) | = 2.3x |
| Pretax available | 300 | | | | |

## Credit Implications

The credit implications of the updated criteria are that Standard & Poor's now believes that historical risk factors applied to TAP contracts with favorable recovery mechanisms are insufficient to capture the financial risk of these fixed obligations. Indeed, in many cases where 5% and 10% risk factors were applied, the change in adjusted financial ratios (from unadjusted) was negligible and had no effect on ratings. Standard & Poor's views the high probability of energy delivery and attendant payment warrants recognition of a higher debt equivalent when capitalizing PPAs. Standard & Poor's will attempt to identify utilities that are more vulnerable to modifications in purchased-power adjustments. Utilities can offset these financial adjustments by recognizing purchased power as a debt equivalent, and incorporating more common equity in their capital structures. However, Standard & Poor's is aware that utilities have been reluctant to take this action because many regulators will not recognize the necessity for, and authorize a return on, this additional wedge of common equity. Alternatively, regulators could authorize higher returns on existing common equity or provide an incentive return mechanism for economic purchases. Notwithstanding unsupportive regulators, the burden will still fall on utilities to offset the financial risk associated with purchases by either qualitative or quantitative means.

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# No Major Shifts In U.S. Utilities' Pension Funding Status

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# No Major Shifts In U.S. Utilities' Pension Funding Status

(The authors would like to acknowledge Trupti Dhamankar and Masako Kuwahara for their contributions to this commentary.)

Standard & Poor's Rating Services has begun including standard post-retirement obligation adjustments in its calculation of regulated utility issuers' financial statistics. Because pension and other postretirement benefit obligations are ultimately recoverable in rates, shortfalls are not considered to be an acute credit factor, and Standard & Poor's historically has not adjusted its ratios for these items. These adjustments will now appear in our published reports for regulated utilities.

The most common postretirement obligations are pensions and retiree medical benefits. We have always acknowledged that large underfunded postretirement obligations could lead to a loss of flexibility for a utility in the long run, and have always incorporated this in our analyses. Therefore, we do not expect ratings will change solely because of this modification.

However, if Standard & Poor's is not comfortable with the ultimate recoverability of a shortfall in rates, this will negatively affect the business risk profile. Meanwhile, if utilities have booked a regulatory asset, and Standard & Poor's is comfortable with the ultimate recoverability of that regulatory asset, it will positively affect the business profile score.

After reviewing pension funding status for regulated entities for three consecutive years, we have concluded that overall funding levels have been quite static over that time frame. Since last year, pension funded status appears to have shifted marginally lower when looking at the distribution of funded status of all the companies, however, on an aggregate basis the funded status is virtually unchanged. Regulated utility companies, unlike industrial companies operating in the competitive marketplace, usually can collect pension expenses in rates. These expenses are included when a utility files a rate case. However, for companies operating under long-term rate freezes or for companies that do not plan to file rate cases in the near term, the inability to collect the appropriate amount of pension expense in rates may lead to diminished credit-protection measures. Also, some may make cash contributions to the pension fund assets. These contributions may divert cash flow intended for other purposes, necessitating borrowing to meet obligations the company had expected to be paid through operating cash flows.

Standard & Poor's financial adjustments for postretirement obligations are fully described in two articles, "Corporate Ratings Criteria--Postretirement Obligations," published Oct. 28, 2004, which was updated by, "CreditStats: Standard & Poor's Revises Statistical Practices," published May 15, 2006.

The analytical adjustments that we make are:

- Debt adjustment. We treat unfunded pension liabilities, health care obligations, and other deferred benefits as debt-like. To simplify this analysis, we net all benefit plan assets and liabilities, combining a company's overfunded plans with its underfunded plans. We use the fullest measure of the unfunded liability available, generally the projected benefit obligation for pensions. Finally, we factor in an income tax benefit, reducing the liability by a tax benefit calculated at the marginal tax rate.
- Equity adjustment. Standard & Poor's increases or reduces equity by the net amount that the funded status of

postretirement obligations exceeds or falls below the amounts recorded on the balance sheet. This amount is also reduced for an income tax benefit, calculated at the marginal tax rate.

- Operating results adjustment. Standard & Poor's only considers pension service cost in calculating operating income. In this adjustment, we remove all amounts related to interest, return on plan assets, actuarial gains and losses, past service costs, settlements, and curtailments, leaving only service costs. This change is not adjusted for income taxes.
- Interest expense adjustment. Pension interest expense, which is the increase in the present value of the pension liability related to the passage of time and the assumed discount rate, is essentially a financing cost and is reclassified as such. Interest expense is reduced, but not below zero, by the return on pension assets. This adjustment is calculated twice, first using the normalized (or expected) return on pension plan assets and second using the actual return on assets. The normalized calculation reduces volatility caused when actual returns on assets differ widely from year to year. This change is not adjusted for income taxes.
- Funds from operations (FFO) adjustment. FFO is defined as net income from operations plus depreciation and amortization, deferred income taxes, and other noncash items. Standard & Poor's makes an additional adjustment to FFO for pension contributions. FFO will include, on a tax-effected basis, the total of service and interest costs, reduced by the return on pension plan assets. Cash payments in excess of this amount are considered to be debt repayment, and cash payments below this amount are considered to be borrowings. This adjustment is also calculated twice, first using the normalized (or expected) return on pension plan assets and second using the actual return on assets.

In September 2004 and May 2005, Standard & Poor's published summaries of U.S. utility pension and other postretirement benefit obligations. The purpose of these articles was to highlight trends in funding status and to benchmark pension and postretirement benefit status and assumptions for regulated entities. The companies in the database are regulated distributors of electricity and/or natural gas, integrated electric and natural gas utilities, and diversified energy companies that focus on regulated electricity and gas operations. The database consists of diversified holding companies and stand-alone entities that are not part of a larger holding company, and includes 91 companies (see Appendix).

To determine which companies might have larger adjustments as a result of using pension adjusted ratios in published numbers, we calculated the total pension and other postretirement benefit shortfall as a percentage of total assets in 2005. The top 10 companies are displayed in table 1, while table 2 shows three key credit metrics on an unadjusted basis for these companies, together with these metrics adjusted for unfunded pension and postretirement obligations.

**Table 1**

**Top 10 Pension Plus OPEB Shortfalls As A Percent Of Total Assets**

| | Funded status (mil. $) | | | | |
|---|---|---|---|---|---|
| | Pension | OPEB | Total | Total assets (mil. $) | Total shortfall as a % of total assets |
| Central Hudson Gas & Electric Corp. | (60) | (88) | (148) | 1,121 | 13.23 |
| National Fuel Gas Co. | (209) | (275) | (483) | 3,723 | 12.98 |
| Madison Gas & Electric Co. | (57) | (46) | (103) | 914 | 11.22 |
| Central Vermont Public Service Corp. | (36) | (24) | (60) | 551 | 10.9 |
| ALLETE Inc. | (75) | (76) | (151) | 1,399 | 10.82 |
| KeySpan Corp. | (502) | (945) | (1,446) | 13,813 | 10.47 |

**Table 1**

**Top 10 Pension Plus OPEB Shortfalls As A Percent Of Total Assets (cont.)**

| | | | | | |
|---|---|---|---|---|---|
| El Paso Electric Co. | (81) | (88) | (169) | 1,665 | 10.16 |
| National Grid USA | (848) | (1,097) | (1,945) | 20,712 | 9.39 |
| WGL Holdings Inc. | 1 | (207) | (207) | 2,446 | 8.46 |
| Laclede Group Inc. | (54) | (39) | (93) | 1,227 | 7.61 |

OPEB--Other postemployment benefits.

**Table 2**

**Credit Measures Pre- And Post-Pension Adjustment**

| | Total debt to total capital (%) | | | FFO to total debt (%) | | | FFO to interest | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pre-pension adjs. | Pension adjusted | Difference | Pre-pension adjs. | Pension adjusted | Difference | Pre-pension adjs. | Pension adjusted | Difference |
| Central Hudson Gas & Electric Corp. | 56.2 | 68.0 | 11.8 | 17.1 | 13.1 | (4.0) | 4.5 | 3.8 | (0.7) |
| National Fuel Gas Co. | 48.7 | 59.8 | 11.1 | 33.2 | 28.2 | (5.0) | 5.5 | 5.9 | 0.4 |
| Madison Gas & Electric Co. | 48.2 | 54.4 | 6.2 | 22.7 | 18.4 | (4.3) | 5.8 | 5.2 | (0.6) |
| Central Vermont Public Service Corp. | 65.9 | 70.5 | 4.6 | 6.6 | 6.3 | (0.3) | 2.1 | 1.8 | (0.3) |
| ALLETE Inc | 46.9 | 54.3 | 7.4 | 14.3 | 11.7 | (2.6) | 3.3 | 3.2 | (0.1) |
| KeySpan Corp. | 52.9 | 61.0 | 8.1 | 19.5 | 16.5 | (3.0) | 4.2 | 4.1 | (0.1) |
| El Paso Electric Co. | 53.2 | 57.7 | 4.5 | 29.3 | 26.0 | (3.3) | 5.8 | 5.8 | 0.0 |
| National Grid USA | 38.5 | 46.3 | 7.8 | 28.8 | 24.2 | (4.6) | 6.1 | 6.1 | 0.0 |
| WGL Holdings, Inc. | 43.4 | 52.4 | 9.0 | 28.8 | 25.7 | (3.1) | 5.4 | 5.6 | 0.2 |
| Laclede Group Inc | 56.9 | 67.3 | 10.4 | 14.1 | 14.8 | 0.7 | 3.3 | 3.3 | 0.0 |

As can be seen in table 1, eight of the top 10 companies are relatively small in terms of total assets. While their funding statuses in absolute dollars are not especially large, the size of the shortfall as compared with the size of the company is large. Indeed, as seen in table 2, Central Hudson Gas and National Fuel Gas each show debt to capital more than 11% higher after adjusting for pension and other postemployment employee benefits (OPEB) shortfalls. Central Hudson collects funds for its pension plan in rates. To the extent that pension expense and postretirement benefits increased to amounts beyond what is captured in rates, Central Hudson does not need to expense the undercollection. Instead, the difference between the actual amounts and those collected in rates is deferred in the form of a regulatory asset, based on the anticipation that the difference will be collected in the future. From a credit perspective, the regulatory deferral provides the utility with some assurance that costs incurred today and funded with operating cash flow will be recovered in the future along with any associated carrying costs.

As can be seen in table 2, the size of the adjustments is not directly related to the size of the shortfall as a percentage of total assets. This is because the adjustment is a function of not just the underfunded amount, but also of the

portion of the underfunded amount that is already reflected on the balance sheet.

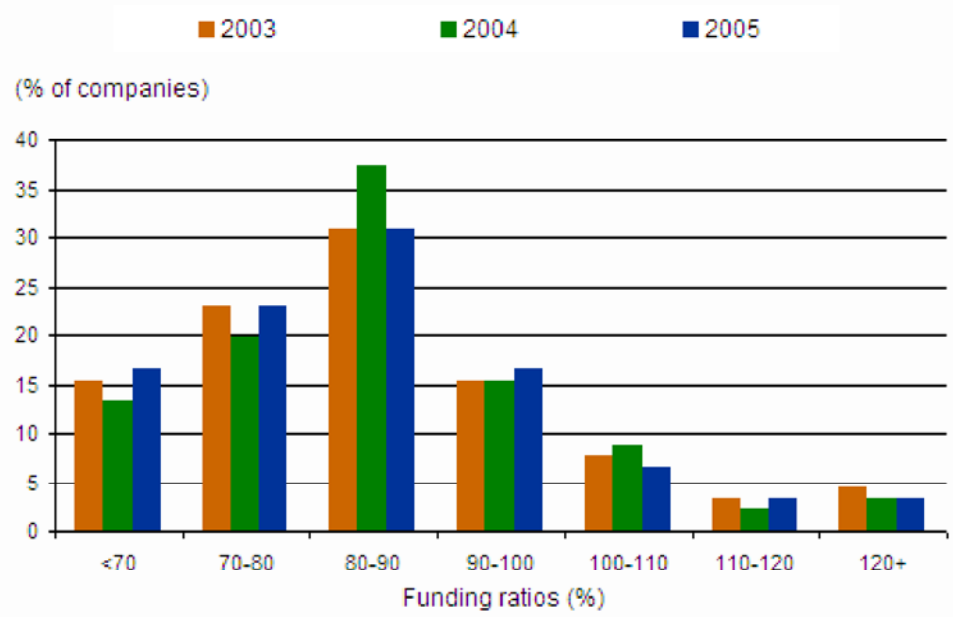
In addition, in some cases FFO/debt and FFO/interest actually improve on an adjusted basis. This is because the adjustment to FFO will be positive if cash payments to the plan are greater than the tax-affected total of service and interest costs, reduced by the return on pension plan assets. Of course, utilities do not always wait to collect the underfunded amounts. In the first quarter of 2005, Exelon Corp. entered into a $2 billion term loan agreement to fund pension contributions. In this case, the off-balance-sheet pension obligation was in fact converted to on-balance-sheet debt. Also, CenterPoint Energy used about $400 million of the proceeds of its sale of Texas Genco Holdings Inc. to fund pension contributions. This reduced the amount of debt reduction possible from the proceeds from that sale. The contribution also allowed CenterPoint to move from a substantially underfunded position to a virtually fully funded position. These are not the only examples, but clearly, underfunded pension obligations affected these companies' decisions as to how to allocate capital.

Although companies can fund pensions through rates, the funding of large shortfalls may not be palatable for regulators. Ultimately, the unfunded obligations will lead to higher rates or strained regulatory relations. If Standard & Poor's is not comfortable with the ultimate recoverability of a shortfall in rates, this will negatively affect the utility's business profile score. Meanwhile, if utilities have booked a regulatory asset, and Standard & Poor's is comfortable with the ultimate recoverability of that regulatory asset, it will positively affect the business profile score.

## Aggregate Pension And OPEB Funding

A review of the 91 companies in the database concludes that there is no material deviation in the pension assumptions and pension and OPEB funded status over last year. The aggregate pension funding ratio, which is the fair value of the plan assets divided by the projected benefit obligation, increased marginally to 88.9% in 2005 from 88.5% in 2004. The chart displays the distribution of pension-funded status over the 91 companies. On an aggregate basis, there appears to be a shift toward less funded levels, with 13% overfunded in 2005 versus 14% in 2004, and 36% below 80% funded in 2005 versus 30% in 2004. Because the aggregate funding level is virtually unchanged, this would imply that larger companies may be improving their funded status, while more of the smaller companies are seeing their funded status fall. Exelon's large contribution is a case-in-point.

**Distribution Of Pension Funding Ratios, 2003-2005**




## Individual Company Status

As previously discussed, regulated utility companies usually can collect pension expenses in rates. However, some may make cash contributions to the pension fund assets in excess of amounts collected through rates, necessitating borrowing to meet obligations the company had expected to be paid through operating cash flows. To highlight companies for which such shortfalls may become an issue, Standard & Poor's examined funding ratios, pension and total postretirement benefit shortfalls, and such shortfalls as a percentage of total debt.

While the aggregate pension funding ratio for the utility group was 88.9% in 2005, pension funding ratios range from 60% to 195%. Table 3 displays the top-five and bottom-five companies for pension funding ratios, respectively.

**Table 3**

**Top Five And Bottom Five Pension Funding Ratios In 2005**

| | Plan assets (mil. $) | Projected benefit obligation (mil. $) | Ratio (%) |
|---|---|---|---|
| **Five lowest funding ratios** | | | |
| PacifiCorp | 806.5 | 1,338.1 | 60.3 |
| El Paso Electric Co. | 123.5 | 204.7 | 60.3 |
| Cinergy Corp.* | 1,169.0 | 1,898.0 | 61.6 |
| CMS Energy Corp. | 1,018.0 | 1,601.0 | 63.6 |
| Black Hills Corp. | 59.3 | 93.1 | 63.7 |

**Table 3**

**Top Five And Bottom Five Pension Funding Ratios In 2005 (cont.)**

| | | | |
|---|---|---|---|
| **Five highest funding ratios** | | | |
| FPL Group Inc. | 3,120.0 | 1,599.0 | 195.1 |
| Nicor Gas Co. | 424.0 | 284.4 | 149.1 |
| SCANA Corp. | 854.3 | 711.5 | 120.1 |
| Dominion Resources Inc. | 4,360.0 | 3,834.0 | 113.7 |
| Southern Co. | 6,147.0 | 5,557.0 | 110.6 |

*Cinergy Corp. has completed its merger with Duke Energy Corp. and will not be part of this database on a stand-alone basis going forward.

More telling is the measurement of total shortfalls as compared with the companies' size as measured by total assets (discussed above and displayed in table 1). This measurement provides a benchmark for how large a relative off-balance-sheet obligation is represented by the pension and OPEB shortfall. For example, Black Hills Corp.'s pension-funding ratio is among the lowest at 63.7%. However, its pension shortfall represents only 1.6% of the company's total assets. The aggregate pension shortfall for the companies analyzed was $15.2 billion in 2005, as compared with $15.3 billion in 2004. The total pension and OPEB shortfall was $40.5 billion, as compared with $40.3 billion in 2004. Clearly, OPEB underfunding is substantially greater than pension underfunding. Interestingly, 37% of the pension shortfall comes from the companies with the five largest pension shortfalls, while only 26% of the total pension and OPEB shortfall comes from the companies with the five largest total pension and OPEB shortfalls.

Tables 4 and 5 display the companies with the highest liabilities. The Tennessee Valley Authority ranked first in the largest pension shortfall category while Exelon, which ranked first in 2004, improved due to its $2 billion cash contribution. However, when including both pension and OPEB funding, Exelon's shortfall remains the largest, and if its merger with Public Service Enterprise Group goes forward, the consolidated entity's shortfall will be quite large on an absolute basis. FirstEnergy Corp. has continuously improved its pension plus OPEB shortfall, which is down to $1.54 billion in 2005 from $1.76 billion in 2004 and $2.68 billion in 2003.

**Table 4**

**Companies With The Largest Pension Shortfalls**

| | Pension shortfall (mil. $) |
|---|---|
| **2005** | |
| Tennessee Valley Authority | 1,418 |
| PG&E Corp. | 1,200 |
| Exelon Corp. | 1,187 |
| Entergy Corp. | 899 |
| National Grid USA | 848 |
| **2004** | |
| Exelon Corp. | 2,761 |
| Tennessee Valley Authority | 1,338 |
| PG&E Corp. | 943 |
| National Grid USA | 776 |
| Entergy Corp. | 761 |

**Table 5**

**Companies With The Largest Pension Plus OPEB Shortfalls**

| | Pension shortfall (mil. $) |
|---|---|
| **2005** | |
| Exelon Corp. | 3,143 |
| Tennessee Valley Authority | 1,962 |
| Public Service Enterprise Group | 1,750 |
| DTE Energy Co. | 1,741 |
| Entergy Corp. | 1,663 |
| **2004** | |
| Exelon Corp. | 4,503 |
| Tennessee Valley Authority | 1,785 |
| FirstEnergy Corp. | 1,761 |
| American Electric Power Co. Inc. | 1,560 |
| Public Service Enterprise Group | 1,519 |

OPEB--Other postemployment employee benefits.

# Appendix

**Table 6**

**Companies In Pension Database**

| | | | |
|---|---|---|---|
| 1 | AGL Resources Inc. | 50 | National Grid USA |
| 2 | Allegheny Energy Inc. | 51 | Nicor Gas Co. |
| 3 | ALLETE Inc. | 52 | NiSource Inc. |
| 4 | Alliant Energy Corp. | 53 | Northeast Utilities |
| 5 | Ameren Corp. | 54 | NorthWestern Corp. |
| 6 | American Electric Power Co. Inc. | 55 | Northwest Natural Gas Co. |
| 7 | Aquila Inc. | 56 | NSTAR |
| 8 | Atmos Energy Corp. | 57 | OGE Energy Corp. |
| 9 | Avista Corp. | 58 | ONEOK Inc. |
| 10 | Black Hills Corp. | 59 | PacifiCorp |
| 11 | Cascade Natural Gas Corp. | 60 | Pacific Gas & Electric Co. |
| 12 | CenterPoint Energy Inc. | 61 | Peoples Energy Corp. |
| 13 | Central Hudson Gas & Electric Corp. | 62 | PEPCO Holdings Inc. |
| 14 | Central Vermont Public Service Corp. | 63 | Piedmont Natural Gas Co. Inc. |
| 15 | Cinergy Corp. | 64 | Pinnacle West Capital Corp. |
| 16 | Cleco Corp. | 65 | Public Service Co. of New Mexico |
| 17 | CMS Energy Corp. | 66 | Portland General Electric Co. |
| 18 | Consolidated Edison Inc. | 67 | PPL Corp. |
| 19 | Constellation Energy Group Inc. | 68 | Progress Energy Inc. |
| 20 | Dominion Resources Inc. | 69 | Public Service Enterprise Group Inc. |
| 21 | Duquesne Light Holdings Inc. | 70 | Puget Energy Inc. |
| 22 | DTE Energy Co. | 71 | Questar Corp. |
| 23 | DPL Inc. | 72 | SCANA Corp. |

**Table 6**

| Companies In Pension Database (cont.) | | | |
|---|---|---|---|
| 24 | Duke Energy Corp. | 73 | SEMCO Energy Inc. |
| 25 | Dynegy Inc. | 74 | Sempra Energy |
| 26 | Edison International | 75 | Sierra Pacific Resources |
| 27 | El Paso Electric Co. | 76 | South Jersey Gas Co. |
| 28 | Empire District Electric Co. | 77 | Southern Co. |
| 29 | Energen Corp. | 78 | Southern Union Co. |
| 30 | Energy East Corp. | 79 | Southwest Gas Corp. |
| 31 | Entergy Corp. | 80 | TECO Energy Inc. |
| 32 | Equitable Resources Inc. | 81 | Tennessee Valley Authority |
| 33 | Exelon Corp. | 82 | Texas-New Mexico Power Co. |
| 34 | FirstEnergy Corp. | 83 | Unisource Energy Corp. |
| 35 | FPL Group Inc. | 84 | TXU Corp. |
| 36 | Great Plains Energy Inc. | 85 | Vectren Corp. |
| 37 | Green Mountain Power Corp. | 86 | Westar Energy Inc. |
| 38 | Hawaiian Electric Industries Inc. | 87 | WGL Holdings Inc. |
| 39 | IDACORP Inc. | 88 | Williams Cos. Inc. (The) |
| 40 | IPALCO Enterprises Inc. | 89 | Wisconsin Energy Corp. |
| 41 | Kentucky Utilities Co. | 90 | WPS Resources Corp. |
| 42 | KeySpan Corp. | 91 | Xcel Energy Inc. |
| 43 | Kinder Morgan Inc. | | |
| 44 | Laclede Group Inc. | | |
| 45 | Louisville Gas & Electric Co. | | |
| 46 | Madison Gas & Electric Co. | | |
| 47 | MDU Resources Group Inc. | | |
| 48 | MidAmerican Energy Holdings Co. | | |
| 49 | National Fuel Gas Co. | | |

STANDARD &POOR'S

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November 1, 2006

# Request For Comments: Imputing Debt To Purchased Power Obligations

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# Request For Comments: Imputing Debt To Purchased Power Obligations

Standard & Poor's Ratings Services is requesting comments from market participants about one specific element of its refined methodology for imputing debt to purchased power obligations involving utility companies.

## Proposal Summary

Standard & Poor's is abandoning its practice of not imputing debt for purchased power agreements (PPA) with terms of three years or less. In addition, where there is a high probability that the utility will have an ongoing obligation to serve load beyond the nominal tenor of short-term contracts, which is almost always the case, Standard & Poor's is contemplating providing evergreen treatment to PPA obligations to reflect the long-term load serving obligations borne by utilities. Unless an electric utility faces a declining population or real prospects of customer migration to other suppliers, both of which are rare, any near-term or intermediate power supply contracts will need to be renewed or replaced with contracted or self-built capacity to continue to meet load obligations.

We acknowledge that the process of providing evergreen treatment to outstanding contracts is imprecise. Uncertainties surround the level of capacity prices that should be assumed and the duration for which contracts should be extended to reflect the load-serving obligation. Therefore, we welcome input on evergreen-related issues as we refine these aspects of the criteria.

## Response Deadline

Please submit your comments on this proposal through Dec. 15, 2006, to criteriacomments@standardandpoors.com

## Imputation Is Important For Credit Analysis

Standard & Poor's has for many years considered PPAs as financial obligations that electric utilities incur when they elect to purchase rather than build their own capacity, and this obligation has affected our view of utilities' creditworthiness. Standard & Poor's has historically applied a "risk factor" of 0% to 100% to the net present value (NPV) of the PPA capacity payments, and capitalized this amount. The risk factor's role is to calibrate the stringencies of debt imputation relative to our evaluation of the certainty of recovery of power purchase costs by virtue of regulatory and legislative protections. The imputation of debt and debt service is important to our credit analysis because the resulting financial adjustments affect several key credit metrics used when we assess credit quality.

The risk factor acts as a proxy for the proportion of risk borne by the utility. At 100%, all risk related to contractual obligations rests on the company with no mitigating regulatory or legislative support. Conversely, a 0% risk factor indicates that the burden of the contractual payments rests solely with ratepayers.

## Reviewing Existing Criteria--And A Few Refinements

From time to time, Standard & Poor's has revisited the methodology employed for making the financial adjustments that incorporate the obligations created by PPAs in its credit evaluations. This article discusses the most recent refinements. It also includes a discussion of additional areas that are under consideration as potential future refinements to our ratings methodology. While we expect very modest, if any, rating changes to result from these modifications, the proposed modifications are being disseminated in this article in the interest of ensuring the ongoing transparency of our rating methodology.

Standard & Poor's published its original PPA criteria in 1991, and provided updates in 1993 and 2003. During this time, the industry has established a very strong track record of demonstrating the viability and effectiveness of the various recovery mechanisms that state regulators have established for costs associated with contracted generation capacity. Recovery mechanisms have largely performed as intended, and related write-offs have proven to be very low. These results justify the continued application of risk factors that serve to temper, often substantially, the amount of debt imputation. Ensuring meaningful comparability in the financial commitments among utilities that are building and those that are purchasing capacity to satisfy load obligations is the rationale for our imputation of debt and debt service for PPAs. PPAs essentially represent substitutes for direct, debt-financed, capital investments. In a sense, a utility that has entered into a PPA has contracted with a supplier to make the financial investment on its behalf. The analytical goal of our financial adjustments for PPAs is to reflect the fixed obligation in a way that depicts any credit exposure that is added by the presence of PPAs. That said, a PPA also shifts various risks to the supplier, such as construction risk and most of the operating risk. As a result, the principal risk borne by a utility that relies on PPAs is the recovery of the financial obligation in rates. While it is the utility that must of course make these payments, however, to the extent that regulators and, in certain cases, legislatures, have structured recovery to assign the burden to ratepayers, the utilities' risk diminishes.

## Refinements To The Methodology

With only modest liberalization of the treatment of PPAs, we are perpetuating the current ratings criteria. Current guidelines for utilities whose capacity payments are recovered in base rates provides for the application of a 50% risk factor to the NPV of the capacity payments. This approach will continue. The NPV is calculated using the utility's average cost of debt (excluding securitization debt), rather than the standardized 10% discount rate used previously. For purposes of adjusting cash flow measures, implied interest expense is calculated on the imputed debt amount. This is accomplished by applying the average cost of debt to the relevant year's imputed debt level.

To date, where PPA capacity costs were recovered through a fuel adjustment clause (FAC), as compared with base rate recovery, a risk factor of 30% has been generally used in lieu of the 50% risk factor. We view the recovery of the capacity component of a PPA through a FAC as providing greater certainty and timeliness than recovery through a base rate mechanism. (The base rate mechanism generally has greater potential for under-recovery due to variations in volume sales and fluctuations in fuel prices over time.) Based on the effectiveness of FAC mechanisms, we will adjust modestly the risk factor of 30% down to 25%.

We recognize that there are certain jurisdictions that have true-up mechanisms that are more favorable and frequent than the review of base rates, but still do not amount to pure FACs. Some of these mechanisms are triggered when certain financial thresholds are met or after prescribed periods of time have passed. In these instances, a risk factor

between the revised 25% FAC risk factor and the 50% risk factor will be employed in calculating adjusted ratios.

In those instances where recovery of PPA-related capacity costs is guaranteed by a legislative mechanism, the level of the risk factor will be determined by the timeliness provided by the legislative true-up mechanism. The strength of the mechanism can result in risk factors as low as 0% because legislatively prescribed recovery mechanisms are viewed as providing utilities with a greater level of protection than that provided by regulatory orders.

There are a number of utilities to which Standard & Poor's does not impute any PPA-related debt. Specifically, Standard & Poor's does not impute debt for supply arrangements if a utility acts merely as a conduit for the delivery of power (e.g., because it has been transformed into a pure transmission and distribution utility by regulators or legislation that has directed the divestiture of all generation assets). For example, in New Jersey, the vertically integrated utility companies were transformed into pure transmission and distribution utilities. The state commission, or an appointed proxy, leads an annual auction in which suppliers bid to serve the state's retail customers, and the utilities are protected from supplier default. In New Jersey, the power supply function of the state's utilities has essentially been reduced to the delivery of power and the collection of revenues from retail customers on behalf of the suppliers. Therefore, while Standard & Poor's has continued to impute debt to New Jersey's utilities for qualifying facility and exempt wholesale generator contracts to which the utilities are parties, we do not do so for other electricity supply contracts where the utilities merely act as conduits between the winners of the regulator's supply auction and the end-user, retail customers.

Finally, Standard & Poor's is abandoning the practice of not imputing debt for contracts with terms of three years or less. In addition to abandoning our historical three-year rule, we are contemplating applying an evergreen mechanism for short-term contracts. Because expiring contracts must be replaced with either debt-financed capacity additions or replacement PPAs for regulated utilities to meet load serving obligations, Standard & Poor's must look beyond the termination of near-term and intermediate-term contracts to approximate the fixed obligations that will succeed the current contracts in evaluating a utility's financial profile.

The process of providing evergreen treatment to outstanding contracts is imprecise. Uncertainties surround the level of capacity prices that should be assumed and the duration for which contracts should be extended to reflect the load-serving obligation. Therefore, we welcome input on evergreen-related issues as we refine these aspects of the criteria over the next 45 days.

## Adjusting Financial Ratios

Standard & Poor's determines the debt equivalence that it will add to a utility's balance sheet as a result of being a party to a PPA by calculating the NPV of the annual capacity payments over the life of the contract because it is the capacity payment that represents the vehicle that funds the recovery of the supplier's investment in the generation asset.

Where the PPA contract price is stated as a single, all-in energy price, Standard & Poor's will use a proxy capacity charge, stated in dollars per kilowatt-year, and multiply that figure by the number of kilowatts under contract. This number will be updated from time to time to reflect prevailing costs for the development and financing of the marginal unit, a combustion turbine. This is a departure from the historical practice of simply halving all-in energy payments and assuming a one-to-one ratio of energy to capacity payments. This new element of the rating methodology will also be applied to generation with extremely low variable costs whose price is stated as an all-in

energy price, such as nuclear and wind generation.

The discount rate used in calculating an NPV, imputed debt, and imputed interest expense is the utility's average interest rate on its outstanding debt (excluding securitization related debt). Standard & Poor's multiplies the NPV of the stream of capacity payments by the appropriate risk factor, which will generally be 25% for capacity payments that are recovered through fuel adjustment clauses and 50% for capacity payments that are recovered in base rates. This amount is added to a utility's reported debt to calculate adjusted debt. Similarly, Standard & Poor's imputes an associated interest expense by multiplying a given year's NPV of PPA-related capacity payments by the risk factor and the company's average interest rate on outstanding debt. The resulting number is added to reported interest expense to calculate adjusted interest coverage ratios.

Key ratios affected include:

- Balance sheet debt is increased by the calculated NPV of the stream of capacity payments, after the application of the risk factor, which is added to the numerator and denominator in calculating an adjusted debt-to-capitalization ratio;
- The implied interest expense derived from applying the average interest rate to the NPV figure is simultaneously treated as a reduction in power purchase expenses and added to interest expense for the calculation of the adjusted funds from operations (FFO) to interest ratio; and
- The FFO to total debt ratio is adjusted by adding the NPV of capacity payments, after the application of the risk factor, to debt in the denominator and an implied depreciation expense is added to FFO.

The depreciation expense adjustment, the last element of the principal financial adjustments cited above, represents a new element within the context of financial adjustments for PPAs (though it has been a long-standing component of the analytical adjustments for leases). Adding an implied depreciation expense to FFO is another element that aligns the analytical treatment of PPAs with the concept of purchased power as a substitute for self-build. The depreciation expense adjustment is a vehicle for capturing the ownership-like attributes of the contracted asset and has the effect of mitigating some of the ratio impact of debt imputation.

The mechanics of these adjustments are illustrated in the table.

**Adjustments To Ratios**

| (Mil. $) | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Thereafter |
|---|---|---|---|---|---|---|
| Funds from operations | 2,500 | | | | | |
| Interest expense | 650 | | | | | |
| Directly issued debt | 10,000 | | | | | |
| Shareholders' equity | 9,000 | | | | | |
| Fixed capacity commitments | 500 | 500 | 500 | 500 | 500 | 4,000 |
| **NPV of fixed capacity commitments** | | | | | | |
| Using a 6.5% discount rate | 4,079 | | | | | |
| Applying a 25% risk factor | 1,020 | | | | | |
| **Unadjusted ratios** | | | | | | |
| FFO/interest (x) | 4.9 | | | | | |
| FFO/total debt (%) | 25 | | | | | |
| Debt/capitalization (%) | 53 | | | | | |

**Adjustments To Ratios (cont.)**

| Ratios adjusted for debt imputation | |
|---|---|
| FFO/interest (x)* | 4.6 |
| FFO/total debt (%)¶ | 23 |
| Debt/capitalization (%)§ | 55 |

*Adds implied interest to the numerator and denominator. Also adds implied depreciation to the numerator. ¶Adds implied depreciation to the numerator and adds implied debt to total debt. §Adds implied debt to both the numerator and the denominator.

Clearly, the higher the risk factor, the greater the effect on adjusted financial ratios. The NPV of the PPA will typically decrease as the maturity of the contract approaches, but on a portfolio basis, the overall NPV may remain somewhat static as old contracts roll off and new ones are executed.

## Conclusion

Absent legislative assurance of recovery, or an obligation that is little more than a fiduciary role for a transmission and distribution utility, PPAs constitute a financial risk by adding fixed obligations, though history is clearly on the side of full recovery. There is ample evidence that utility regulators and commissions have intended these costs to be for the account of the ratepayer, which justifies the continued use of risk factors. The modest revisions to our methodology seek to perpetuate our use of financial adjustments that reflect the legislative and regulatory protections that mitigate regulated utilities' exposure to the fixed obligations created by PPAs.

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## Credit FAQ:

# Imputed Debt Calculation For U.S. Utilities' Power Purchase Agreements

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**Credit FAQ:**

# Imputed Debt Calculation For U.S. Utilities' Power Purchase Agreements

In November 2006, Standard & Poor's Ratings Services invited members of the U.S. electric industry and interested parties to provide us with comments on our proposal to incorporate evergreen treatment in the debt equivalents we calculate to reflect the fixed obligations created by power purchase agreements (PPAs). Evergreen treatment would, for analytical purposes, assume an extension of the life of some short- and intermediate-term PPAs, so as to achieve comparability in the financial metrics of companies with supply arrangements of varying durations.

We received comments from every sector of the power industry--utilities, independent power producers, trade organizations, consultants, investors, and regulators. Based on the comments received, we have reached a number of conclusions regarding the application of evergreen treatment to PPAs in our analysis. We have also made a number of clarifications and refinements to our rating methodology. This discussion supplements our Nov. 1, 2006 article "Request for Comments: Imputing Debt to Purchased Power Obligations," which is available on RatingsDirect.

## Frequently Asked Questions

### How is evergreen treatment applied in Standard & Poor's credit analysis?

Standard & Poor's adjusts reported financial metrics to capitalize portions of the costs of PPAs. The intent of these adjustments is to capture fixed PPA obligations that have debt-like attributes because they fund the recovery of third-party power suppliers' capital investments in generation assets. These fixed obligations merit inclusion in a utility's financial metrics as though they are part of a utility's permanent capital structure. Evergreen treatment would extend the tenor of short- and intermediate-term contracts to reflect the long-term obligation of electric utilities to meet their customers' demand for electricity.

We have concluded that there is a limited pool of utilities whose portfolios of existing and projected PPAs do not meaningfully correspond to long-term load serving obligations. Although evergreen treatment will be applied selectively in those cases where the portfolio of existing and projected PPAs is inconsistent with long-term load-serving obligations, a blanket application of evergreen treatment is not warranted.

The net present value (NPV) of the fixed obligations associated with a portfolio of short-term or intermediate-term contracts can lead to distortions in a utility's financial profile relative to the NPV of the fixed obligations of a utility with a portfolio of PPAs that is made up of longer-term commitments. Where there is the potential for such distortions, rating committees will consider evergreen treatment of existing PPA obligations as a scenario for inclusion in the rating analysis.

### What are the mechanics of PPA debt imputation and evergreen treatment?

A starting point for calculating the debt to be imputed for PPA-related fixed obligations can be found among the "commitments and contingencies" in the notes to a utility's financial statements. An NPV is calculated for the stream of capacity payments associated with the outstanding contracts included in the financial statements. The notes to the financial statements report capacity payments for the succeeding five years and a "thereafter" period.

While we have access to proprietary forecasts that show the detail underlying the costs that are amalgamated

beyond the five-year horizon, others, for purposes of calculating an NPV, can divide the amount reported as "thereafter" by the average of the capacity payments in the preceding five years to derive an approximate tenor of the amounts combined as the sum of the obligations beyond the fifth year.

In calculating debt equivalents, we also include new contracts that will commence during the forecast period and aren't reflected in the notes to the financial statements. For this group of contracts, debt imputation will not commence until the year that energy deliveries are to begin under the anticipated contract.

### How is NPV calculated?

The NPV is calculated using a discount rate equivalent to the company's average cost of debt, net of securitization debt. Once we arrive at the NPV, we apply a risk factor to reflect the benefits of regulatory or legislative cost recovery mechanisms (see "Request for Comments: Imputing Debt to Purchased Power Obligations," (cited above) for a discussion of risk factors).

### How does evergreen treatment alter the PPA debt adjustment?

If evergreen treatment is warranted, we would extend the expiration of existing contracts and those that are slated to commence during the five-year horizon. Based on our analysis of several companies, we have determined that any evergreen extension of the tenor of existing contracts and anticipated contracts should extend those contracts to 12 years beyond the relevant forecast year.

To decide whether to apply evergreen treatment, we would start with an examination of actual capacity payments scheduled during the five-year horizon and the period represented as the thereafter period in the financial statements. If we conclude that the duration of PPAs is short relative to our targeted tenor, we would then add capacity payments until the targeted tenor is achieved. The price for the capacity that we add will be derived from new peaker entry economics.

We use empirical data to establish the cost of developing new peaking capacity and will reflect regional differences in our analysis. The cost of new capacity is translated into a dollars-per-kilowatt-year figure using a proxy weighted average cost of capital and a proxy capital recovery period.

### Does customer choice curb the need for evergreen treatment?

Several comments submitted to us observed that over the long term there is the potential that customers may switch to third-party providers, thereby undermining the rationale for an evergreen adjustment. We acknowledge that the introduction of customer migration would alter the long-term obligation to serve. At the same time, it must be noted that our rating methodology already addresses this concern. Customer choice typically goes hand in hand with the transformation of a utility into a pure transmission and distribution system. We have previously stated that we won't impute debt for those utilities whose role--as a result of either regulatory orders or legislation--is limited to that of a conduit between suppliers and retail customers. Therefore, utilities whose customers have retail choice aren't generally exposed to debt imputation and, in turn, we won't apply evergreen treatment to their supply obligations.

### Have there been revisions to the analytical treatment of short-term PPAs?

For many years, Standard & Poor's didn't calculate debt equivalents for the fixed costs of power supply arrangements whose tenor was three years or less. We recently announced our abandonment of this exception to our debt imputation criteria. However, we understand that there are some utilities that use short-term PPAs of approximately one year or less as gap fillers pending either the construction of new capacity or the execution of

long-term PPA contracts. To the extent that such short-term supply arrangements represent a nominal percentage of demand and serve the purposes described above, we will neither impute debt for such contracts nor provide evergreen treatment to such contracts.

### Are accommodations made for PPAs that are treated as leases in the financial statements?

Several utilities have reported that their accountants dictate that certain PPAs need to be treated as leases for accounting purposes due to the tenor of the PPA or the residual value of the asset upon the PPA's expiration. We have consistently taken the position that companies should identify those capacity charges that are subject to lease treatment in the financial statements so that we can accord PPA treatment to those obligations, in lieu of lease treatment. That is, PPAs that receive lease treatment for accounting purposes won't be subject to a 100% risk factor for analytical purposes as though they were leases. Rather, the NPV of the stream of capacity payments associated with these PPAs will be reduced by the risk factor that is applied to the utility's other PPA commitments.

### How is the depreciation expense related to PPAs calculated?

We noted in our November article that we now add an implied depreciation expense to funds from operations (FFO) to align the analytical treatment of PPAs with the concept of purchased power as a substitute for self-build. We observed that we calculate imputed depreciation expense in conformity with the methodology used for calculating a depreciation adjustment as an offset to debt equivalents created by leases.

The imputed depreciation expense is calculated for any given year by taking the scheduled fixed capacity payment commitment for that year and subtracting from it the implied interest expense calculated from the NPV of the stream of capacity payments associated with that year. The calculated depreciation proxy is added to FFO in the numerator as part of the calculation of both the FFO-to-interest and FFO-to-debt ratios.

### What adjustments are made for tolling contracts?

We will assign a 100% risk factor when imputing debt to an unregulated energy company that has entered into a tolling agreement for a power plant's output. This is done because of the absence of a regulatory mechanism for the recovery of the fixed costs presented by the tolling arrangement.

### Are transmission contracts treated differently than PPAs?

In recent years, some utilities have entered into long-term transmission contracts in lieu of building generation. In some cases, these transmission contracts provide access to specific power plants, while other transmission arrangements provide access to competitive wholesale electricity markets. We have concluded that these types of transmission arrangements represent extensions of the power plants to which they are connected or the markets that they serve. Irrespective of whether these transmission lines are integral to the delivery of power from a specific plant or are conduits to wholesale markets, we view these arrangements as exhibiting very strong parallels to PPAs as a substitute for investment in power plants. Consequently, we will impute debt for the fixed costs associated with long-term transmission contracts.

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STANDARD &POOR'S

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# Standard & Poor's Methodology For Imputing Debt For U.S. Utilities' Power Purchase Agreements

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# Standard & Poor's Methodology For Imputing Debt For U.S. Utilities' Power Purchase Agreements

For many years, Standard & Poor's Ratings Services has viewed power supply agreements (PPA) in the U.S. utility sector as creating fixed, debt-like, financial obligations that represent substitutes for debt-financed capital investments in generation capacity. In a sense, a utility that has entered into a PPA has contracted with a supplier to make the financial investment on its behalf. Consequently, PPA fixed obligations, in the form of capacity payments, merit inclusion in a utility's financial metrics as though they are part of a utility's permanent capital structure and are incorporated in our assessment of a utility's creditworthiness.

We adjust utilities' financial metrics, incorporating PPA fixed obligations, so that we can compare companies that finance and build generation capacity and those that purchase capacity to satisfy customer needs. The analytical goal of our financial adjustments for PPAs is to reflect fixed obligations in a way that depicts the credit exposure that is added by PPAs. That said, PPAs also benefit utilities that enter into contracts with suppliers because PPAs will typically shift various risks to the suppliers, such as construction risk and most of the operating risk. PPAs can also provide utilities with asset diversity that might not have been achievable through self-build. The principal risk borne by a utility that relies on PPAs is the recovery of the financial obligation in rates.

## The Mechanics Of PPA Debt Imputation

A starting point for calculating the debt to be imputed for PPA-related fixed obligations can be found among the "commitments and contingencies" in the notes to a utility's financial statements. We calculate a net present value (NPV) of the stream of the outstanding contracts' capacity payments reported in the financial statements as the foundation of our financial adjustments.

The notes to the financial statements enumerate capacity payments for the five years succeeding the annual report and a "thereafter" period. While we have access to proprietary forecasts that show the detail underlying the costs that are amalgamated beyond the five-year horizon, others, for purposes of calculating an NPV, can divide the amount reported as "thereafter" by the average of the capacity payments in the preceding five years to derive an approximate tenor of the amounts combined as the sum of the obligations beyond the fifth year.

In calculating debt equivalents, we also include new contracts that will commence during the forecast period. Such contracts aren't reflected in the notes to the financial statements, but relevant information regarding these contracts are provided to us on a confidential basis. If a contract has been executed but the energy will not flow until some later period, we won't impute debt for that contract until the year that energy deliveries begin under the contract if the contract represents incremental capacity. However, to the extent that the contract will simply replace an expiring contract, we will impute debt as though the future contract is a continuation of the existing contract.

We calculate the NPV of capacity payments using a discount rate equivalent to the company's average cost of debt, net of securitization debt. Once we arrive at the NPV, we apply a risk factor, as is discussed below, to reflect the benefits of regulatory or legislative cost recovery mechanisms.

Balance sheet debt is increased by the risk-factor-adjusted NPV of the stream of capacity payments. We derive an adjusted debt-to-capitalization ratio by adding the adjusted NPV to both the numerator and the denominator of that ratio.

We calculate an implied interest expense for the imputed debt by multiplying the same utility average cost of debt used as the discount rate in the NPV calculation by the amount of imputed debt. The adjusted FFO-to-interest expense ratio is calculated by adding the implied interest expense to both the numerator and denominator of the equation. We also add implied depreciation to the equation's numerator. We calculate the adjusted FFO-to-total-debt ratio by adding imputed debt to the equation's denominator and an implied depreciation expense to its numerator.

Our adjusted cash flow credit metrics include a depreciation expense adjustment to FFO. This adjustment represents a vehicle for capturing the ownership-like attributes of the contracted asset and tempers the effects of imputation on the cash flow ratios. We derive the depreciation expense adjustment by multiplying the relevant year's capacity payment obligation by the risk factor and then subtracting the implied PPA-related interest expense for that year from the product of the risk factor times the scheduled capacity payment.

## Risk Factors

The NPVs that Standard & Poor's calculates to adjust reported financial metrics to capture PPA capacity payments are multiplied by risk factors. These risk factors typically range between 0% to 50%, but can be as high as 100%. Risk factors are inversely related to the strength and availability of regulatory or legislative vehicles for the recovery of the capacity costs associated with power supply arrangements. The strongest recovery mechanisms translate into the smallest risk factors. A 100% risk factor would signify that all risk related to contractual obligations rests on the company with no mitigating regulatory or legislative support.

For example, an unregulated energy company that has entered into a tolling arrangement with a third-party supplier would be assigned a 100% risk factor. Conversely, a 0% risk factor indicates that the burden of the contractual payments rests solely with ratepayers. This type of arrangement is frequently found among regulated utilities that act as conduits for the delivery of a third party's electricity and essentially deliver power, collect charges, and remit revenues to the suppliers. These utilities have typically been directed to sell all their generation assets, are barred from developing new generation assets, and the power supplied to their customers is sourced through a state auction or third parties, leaving the utilities to act as intermediaries between retail customers and the electricity suppliers.

Intermediate degrees of recovery risk are presented by a number of regulatory and legislative mechanisms. For example, some regulators use a utility's rate case to establish base rates that provide for the recovery of the fixed costs created by PPAs. Although we see this type of mechanism as generally supportive of credit quality, the fact remains that the utility will need to litigate the right to recover costs and the prudence of PPA capacity payments in successive rate cases to ensure ongoing recovery of its fixed costs. For such a PPA, we employ a 50% risk factor. In cases where a regulator has established a power cost adjustment mechanism that recovers all prudent PPA costs, we employ a risk factor of 25% because the recovery hurdle is lower than it is for a utility that must litigate time and again its right to recover costs.

We recognize that there are certain jurisdictions that have true-up mechanisms that are more favorable and frequent than the review of base rates, but still don't amount to pure pass-through mechanisms. Some of these mechanisms

are triggered when certain financial thresholds are met or after prescribed periods of time have passed. In these instances, in calculating adjusted ratios, we will employ a risk factor between the revised 25% risk factors for utilities with power cost adjustment mechanisms and 50%.

Finally, we view legislatively created cost recovery mechanisms as longer lasting and more resilient to change than regulatory cost recovery vehicles. Consequently, such mechanisms lead to risk factors between 0% and 15%, depending on the legislative provisions for cost recovery and the supply function borne by the utility. Legislative guarantees of complete and timely recovery of costs are particularly important to achieving the lowest risk factors.

## Illustration Of The PPA Adjustment Methodology

The calculations of the debt equivalents, implied interest expense, depreciation expense, and adjusted financial metrics, using risk factors, are illustrated in the following example:

**Example Of Power-Purchase Agreement Adjustment**

| ($000s) | Assumption | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Thereafter |
|---|---|---|---|---|---|---|---|
| Cash from operations | 2,000,000 | | | | | | |
| Funds from operations | 1,500,000 | | | | | | |
| Interest expense | 444,000 | | | | | | |
| **Directly issued debt** | | | | | | | |
| Short-term debt | 600,000 | | | | | | |
| Long-term due within one year | 300,000 | | | | | | |
| Long-term debt | 6,500,000 | | | | | | |
| Shareholder's Equity | 6,000,000 | | | | | | |
| Fixed capacity commitments | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 | 4,200,000* |
| **NPV of fixed capacity commitments** | | | | | | | |
| Using a 6.0% discount rate | 5,030,306 | | | | | | |
| Application of an assumed 25% risk factor | 1,257,577 | | | | | | |
| Implied interest expense¶ | 75,455 | | | | | | |
| Implied depreciation expense | 74,545 | | | | | | |
| **Unadjusted ratios** | | | | | | | |
| FFO to interest (x) | 4.4 | | | | | | |
| FFO to total Debt (%) | 20.0 | | | | | | |
| Debt to capitalization (%) | 55.0 | | | | | | |
| **Ratios adjusted for debt imputation** | | | | | | | |
| FFO to interest (x)§ | 4.0 | | | | | | |
| FFO to total debt (%)** | 18.0 | | | | | | |
| Debt to capitalization (%)¶¶ | 59.0 | | | | | | |

*Thereafter approximate years: 7. ¶The current year's implied interest is subtracted from the product of the risk factor multiplied by the current year's capacity payment. §Adds implied interest to the numerator and denominator and adds implied depreciation to FFO. **Adds implied depreciation expense to FFO and implied debt to reported debt. ¶¶Adds implied debt to both the numerator and the denominator. FFO--Funds from operations. NPV--Net present value.

## Short-Term Contracts

Standard & Poor's has abandoned its historical practice of not imputing debt for contracts with terms of three years or less. However, we understand that there are some utilities that use short-term PPAs of approximately one year or less as gap fillers pending the construction of new capacity. To the extent that such short-term supply arrangements represent a nominal percentage of demand and serve the purposes described above, we will neither impute debt for such contracts nor provide evergreen treatment to such contracts.

## Evergreen Treatment

The NPV of the fixed obligations associated with a portfolio of short-term or intermediate-term contracts can lead to distortions in a utility's financial profile relative to the NPV of the fixed obligations of a utility with a portfolio of PPAs that is made up of longer-term commitments. Where there is the potential for such distortions, rating committees will consider evergreen treatment of existing PPA obligations as a scenario for inclusion in the rating analysis. Evergreen treatment extends the tenor of short- and intermediate-term contracts to reflect the long-term obligation of electric utilities to meet their customers' demand for electricity.

While we have concluded that there is a limited pool of utilities whose portfolios of existing and projected PPAs don't meaningfully correspond to long-term load serving obligations, we will nevertheless apply evergreen treatment in those cases where the portfolio of existing and projected PPAs is inconsistent with long-term load-serving obligations. A blanket application of evergreen treatment is not warranted.

To provide evergreen treatment, Standard & Poor's starts by looking at the tenor of outstanding PPAs. Others can look to the "commitments and contingencies" in the notes to a utility's financial statements to derive an approximate tenor of the contracts. If we conclude that the duration of PPAs is short relative to our targeted tenor, we would then add capacity payments until the targeted tenor is achieved. Based on our analysis of several companies, we have determined that the evergreen extension of the tenor of existing contracts and anticipated contracts should extend contracts to a common length of about 12 years.

The price for the capacity that we add will be derived from new peaker entry economics. We use empirical data to establish the cost of developing new peaking capacity and reflect regional differences in our analysis. The cost of new capacity is translated into a dollars per kilowatt-year (kW-year) figure using a weighted average cost of capital for the utility and a proxy capital recovery period.

## Analytical Treatment Of Contracts With All-In Energy Prices

The pricing for some PPA contracts is stated as a single, all-in energy price. Standard & Poor's considers an implied capacity price that funds the recovery of the supplier's capital investment to be subsumed within the all-in energy price. Consequently, we use a proxy capacity charge, stated in $/kW, to calculate an implied capacity payment associated with the PPA. The $/kW figure is multiplied by the number of kilowatts under contract. In cases of resources such as wind power that exhibit very low capacity factors, we will adjust the kilowatts under contract to reflect the anticipated capacity factor that the resource is expected to achieve.

We derive the proxy cost of capacity using empirical data evidencing the cost of developing new peaking capacity.

We will reflect regional differences in our analysis. The cost of new capacity is translated into a $/kW figure using a weighted average cost of capital and a proxy capital recovery period. This number will be updated from time to time to reflect prevailing costs for the development and financing of the marginal unit, a combustion turbine.

## Transmission Arrangements

In recent years, some utilities have entered into long-term transmission contracts in lieu of building generation. In some cases, these contracts provide access to specific power plants, while other transmission arrangements provide access to competitive wholesale electricity markets. We have concluded that these types of transmission arrangements represent extensions of the power plants to which they are connected or the markets that they serve. Irrespective of whether these transmission lines are integral to the delivery of power from a specific plant or are conduits to wholesale markets, we view these arrangements as exhibiting very strong parallels to PPAs as a substitute for investment in power plants. Consequently, we will impute debt for the fixed costs associated with long-term transmission contracts.

## PPAs Treated As Leases

Several utilities have reported that their accountants dictate that certain PPAs need to be treated as leases for accounting purposes due to the tenor of the PPA or the residual value of the asset upon the PPA's expiration. We have consistently taken the position that companies should identify those capacity charges that are subject to operating lease treatment in the financial statements so that we can accord PPA treatment to those obligations, in lieu of lease treatment. That is, PPAs that receive operating lease treatment for accounting purposes won't be subject to a 100% risk factor for analytical purposes as though they were leases. Rather, the NPV of the stream of capacity payments associated with these PPAs will be reduced by the risk factor that is applied to the utility's other PPA commitments. PPAs that are treated as capital leases for accounting purposes will not receive PPA treatment because capital lease treatment indicates that the plant under contract economically "belongs" to the utility.

## Evaluating The Effect Of PPAs

Though history is on the side of full cost recovery, PPAs nevertheless add financial obligations that heighten financial risk. Yet, we apply risk factors that reduce debt imputation to recognize that utilities that rely on PPAs transfer significant risks to ratepayers and suppliers.

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# Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I

## *Standardized Adjustments to Enable Global Consistency for US and Canadian GAAP Issuers*

## Product of the Global Standards Committee

In this Methodology we announce changes to the global standard adjustments to financial statements of non-financial corporations that report under US or Canadian GAAP[1] and reissue the complete methodology, updated for changes, so that we continue to summarize in a single document the most recent status of our global standard adjustments. A companion document discusses adjustments to financial statements prepared under International Financial Reporting Standards (IFRS)[2].

This methodology is the product of the Global Standards Committee, which is responsible for defining the standards that Moody's corporate analysts employ in analyzing financial statements. Our goal in doing so is to enhance consistency of our global rating practice, among analysts, and across countries and industries.

## Changes to our Global Standard Adjustments

We are changing our adjustments related to pension plans and operating leases, representing two of our nine standard adjustments.

### PENSIONS

We are adding an incremental adjustment related to "unfunded" defined benefit pension plans. With unfunded plans, common in certain European countries, companies are not required and elect not to set aside assets in a separate pension trust. Moody's has long adjusted financial statements of European companies sponsoring these plans[3], as described below. By extending this adjustment to companies that report under US or Canadian GAAP, we are standardizing our analysis of unfunded plans for all companies, no matter where their locations or the GAAP of their home countries.

1. *See Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations — Part I, July 2005 (#93570).*
2. *See Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations — Part II, February 2006 (#96729).*
3. *See Moody's Approach to Analyzing Pension Obligations of Corporations, November 1998 (#39330)*

Unfunded and pre-funded pension systems differ in important respects. In contrast to pre-funded systems, unfunded systems:

- Result in the inclusion of the gross pension obligation (in place of the net obligation) on the balance sheet;
- Usually do not require pre-funding of the pension obligation; and
- Allow a long time horizon to deal with funding of pension payments providing sponsoring companies with a choice of how to meet their obligations.

To improve accounting comparability with pre-funded plans, Moody's incremental adjustment for unfunded plans simulates pre-funding of the gross pension obligation. If the company sponsoring the unfunded plan can access the capital markets, Moody's assumes that the company will maintain its existing debt and equity mix in funding future pension obligations. As a result, for unfunded pensions, we adjust the sponsoring company's balance sheet for an "equity credit," which reduces the amount of gross pension obligation that we would otherwise reclassify to debt.

Moody's does not further adjust the income statement or the cash flow statement for companies with unfunded pension obligations, other than to align interest expense with our adjustment to debt for the "equity credit" noted above.

We provide the specific mechanics of our unfunded pension adjustment in this methodology under Part 2 of the pension adjustment (Adjustment #1).

Our adjustment for unfunded pensions will reduce the amount of adjusted debt for some global companies sponsoring unfunded pension plans. However, we suspect that this adjustment will impact the ratings of few, if any, companies.

## OPERATING LEASES

We are changing two features of our adjustment to capitalize leases that companies account for as operating leases in order to:

1. Simplify the calculations of lease-related debt and the interest and depreciation components of rent expense
2. Increase the amount of capital expenditures companies report on the cash flow statement by the depreciation component of rent expense. Our former lease adjustment did not affect capital expenditures.

Since the announcement of standard adjustments in July 2005 companies and investors have argued that our lease adjustments were unnecessarily complex. We believe we can simplify the calculation, while meeting our goal of improving comparability between firms which purchase and firms which lease assets.

In place of the modified present value method, we will calculate the amount of debt related to operating leases based on a multiple of the most recent year's rent expense[4] generally standardized by industry. We are also simplifying our calculations of the interest and depreciation components of rent expense based on market convention that interest is one-third of lease expense and depreciation the remaining two thirds. While more complex calculations produce a slightly more accurate result, the simple market convention produces a result that is sufficiently accurate.

We are also amending our adjustment for operating leases to increase the amount of capital expenditures companies report on the cash flow statement to reflect the spending needed to support the business. We based our former approach, which did not affect capital expenditures, on how accounting rules report capital leases, viewing them as non-cash transactions at inception of the lease. Although consistent with accounting rules, not recognizing capital expenditures for leases understates the amount of capital assets and spending needed to support the business. This, in turn, overstates certain credit-relevant metrics, such as free cash flow. As a rough approximation of capital expenditures related to leasing, we will assume that operating leases increase capital expenditures by the amount of depreciation we attribute to the leased assets.

Our modeling suggests that our simplified approach to the operating lease adjustment closely approximates the results we would achieve using our more complex approach. Accordingly, we expect our simplified approach will not impact our credit ratings.

The remainder of this document presents our methodology for all standard adjustments for companies' financial statements, updated for the changes we outlined above.

*4. If the multiple approach results in lease-related debt that is less than the present value of future minimum lease payments, we will use the present value amount as a floor.*

## Summary

Moody's adjusts financial statements to better reflect the underlying economics of transactions and events and to improve the comparability of financial statements. We compute credit-relevant ratios using adjusted data and base our debt ratings, in part, on those ratios.

This report, the first of a two part series, discusses Moody's Standard Adjustments to financial statements prepared under US and Canadian accounting principles (GAAP). Part II discusses our standard adjustments to statements following International Financial Reporting Standards (IFRS). Those adjustments include many we discuss herein and a few that are unique to IFRS.

The standard adjustments Moody's applies to financial statements following US and Canadian GAAP relate to:

- Underfunded and unfunded defined benefit pensions
- Operating leases
- Capitalized interest
- Employee stock compensation
- Hybrid securities
- Securitizations
- Inventory on a LIFO cost basis
- Unusual and non-recurring items

Analysts compute Standard Adjustments with the help of worksheets, which promote consistency and accuracy (see the Appendix for Worksheets A through I). Moody's has published methodologies relating to several of the adjustments and the worksheet calculations have been prepared in accordance with these methodologies. Two methodologies pertaining to unfunded defined benefit pensions and operating leases are modified by this report and the changes are discussed herein.

In addition to the Standard Adjustments, Moody's analysts may also make non-standard adjustments to financial statements for other matters to better reflect underlying economics and improve comparability with peer companies. For example, we may adjust financial statements to reflect estimates or assumptions that we believe are more prudent for credit analysis.

With the introduction of Standard Adjustments, Moody's research will, over time disclose, for each rated company, the nature and amount of all Standard Adjustments and those other adjustments that we make based on publicly available information. We will also publish key financial ratios reflecting the adjustments we make to financial statements. Our financial ratios will no longer contain complicated add backs to the numerators and denominators, but will instead be simpler constructs based on fully adjusted sets of financial statements.

Our adjustments do not imply that a company's financial statements fail to comply with GAAP. Indeed, many of our adjustments are inconsistent with current accounting principles. Our goal is to enhance the analytical value of financial data and not to measure compliance with rules.

Over time, we may modify our Standard Adjustments as global reporting issues evolve. If so, we will alert readers of our research and, where appropriate, solicit comment prior to doing so.

## Adjustments — Purpose, Methods and Transparency

In general, Moody's adjusts financial statements to better reflect, for analytical purposes, the underlying economics of transactions and events and to improve comparability of a company's financial statements with those of its peers. More specifically, we adjust financial statements to:

- ***Apply accounting principles that we believe more faithfully capture underlying economics.*** One example is our view that operating leases create property rights and debt-like obligations that we should recognize on balance sheets. Indeed, most of our standard adjustments fall in the accounting principle category.
- ***Identify and segregate the effects of unusual or non-recurring items.*** By stripping out these effects, we are better able to perceive the results of ongoing, recurring and sustainable activities. Our standard adjustment "unusual and non-recurring items" addresses this category.
- ***Improve comparability by aligning accounting principles.*** For example, we adjust LIFO inventories so that all companies in a peer group measure inventory on a comparable, in this case FIFO, basis.
- ***Reflect estimates or assumptions that we believe are more prudent, for analytical purposes, in the company's particular circumstances.*** These adjustments typically relate to highly judgmental areas such as asset

valuation allowances, impairment of assets, and contingent liabilities. No standard adjustment falls in this category as the calculations are too company-specific. Instead, we adjust financials in this area based on individual facts and circumstances.

Our adjustments do not imply that a company's financial statements fail to comply with GAAP. Indeed, many of our adjustments are inconsistent with current accounting principles. Our goal is to enhance the analytical value of financial data and not to measure compliance with rules.

Moody's has long adjusted financial data to improve analytical insight. The purpose and concepts of adjustments are not new and Moody's has published several methodologies that discuss analytic adjustments. However, concurrent with this rating methodology, Moody's is now formalizing and standardizing certain adjustments. Our goal in doing so is to enhance consistency of our global rating practice, among analysts, and across countries and industries.

We are facilitating the calculation of Standard Adjustments with worksheets (see Appendix for Worksheets A though I). Standard Adjustments supported by worksheets enable a disciplined and systematic method for analyzing company financial data we use in the rating process. This, in turn, produces more comparable data for peer comparisons that are critical to our ratings. Moody's has published methodologies relating to several of the Standard Adjustments and the worksheet calculations have been prepared in accordance with these methodologies.

This report modifies two adjustments, those pertaining to unfunded defined benefit pensions and operating leases. Details of the modifications are included in sections of this report entitled:

- Standard Adjustment # 1 — Underfunded and Unfunded Defined Benefit Pensions, and
- Standard Adjustment # 2 — Operating Leases.

We will publish key financial ratios reflecting the adjustments we make to financial statements. Concurrent with this rating methodology, we are changing our practice of adjusting financial data through the definition of ratios. Going forward, we will make comprehensive adjustments to complete sets of financial statements and then compute ratios based on the adjusted financial statements. Our basic financial ratios will no longer contain complicated add backs to the numerators and denominators, but will instead be simpler constructs based on fully adjusted sets of financial statements.

Our adjustments affect all three primary financial statements, which, after our adjustments, continue to interact:

- ***Balance sheet:*** We are adjusting the value of certain items, removing the artificial effects of smoothing permitted by accounting standards, recognizing certain off-balance sheet transactions, and changing the debt versus equity classification of certain hybrid financial instruments with both debt and equity features.
- ***Income statement:*** We are eliminating the effects of certain smoothing, recognizing additional expenses, attributing interest to new debt that we recognize, and segregating the effects of unusual or non-recurring items.
- ***Cash flow statement:*** We are adjusting the cash flow statement to be consistent with our adjustments to the balance sheet and income statement. For example, we are identifying and segregating the cash effects of the unusual transactions and events that we separate on the income statement.

We will warehouse "unadjusted financials" (i.e. publicly reported financials) and "adjusted financials" (i.e. publicly reported data plus adjustments) in a database and use it to generate peer comparisons and quantitative rating criteria by industry. This data will facilitate rating comparability and more transparent communication.

Moody's will be increasingly transparent to the market about the nature and amount of analytical adjustments we are making to a company's financial statements. With the introduction of Standard Adjustments, Moody's research will, over time, disclose, for each rated company, the nature and amount of all Standard Adjustments and those other adjustments that the analyst bases on publicly available information. We will also publish key financial ratios reflecting the adjustments we make to financial statements.

## Adjustments — Nature

The following describes the Standard Adjustments applicable to US and Canadian GAAP financial statements and the name of related previously published methodology.

**Table 1: Standard Adjustments and Corresponding Methodologies**

| Adjustment | Purpose | Methodology |
|---|---|---|
| Underfunded and unfunded defined benefit pensions | To eliminate the effects of artificial smoothing of pension expense permitted by accounting standards and recognize as debt (to the extent appropriate) the amount the pension obligation is under- or unfunded. We also change the classification of cash contributed to the pension trust on the cash flow statement under certain circumstances. | Moody's Approach to Analyzing Pension Obligations of Corporations, November 1998 (#39330)<br><br>Analytical Observations Related to US Pension Obligations, January 2003 (#77242)<br><br>**See Standard Adjustment # 1 — Defined Benefit Pensions for changes to the previously published methodology** |
| Operating leases | To capitalize operating leases and recognize a related debt obligation. We re-characterize rent expense on the income statement by imputing interest on the debt (one-third of rent) and considering the residual amount (two thirds of rent) depreciation. On the cash flow statement we reclassify the principal payment portion of the rent payment and simulate capital expenditures for newly acquired assets under operating leases. | Off-Balance Sheet Leases: Capitalization and Ratings Implications, October 1999 (#48591) |
| Capitalized interest | To expense the amount of interest capitalized in the current year. On the cash flow statement, we reclassify capitalized interest from an investing cash outflow to an operating cash outflow. | *** |
| Employee stock compensation | To expense the cost of employee stock compensation for companies not recognizing this expense. On the cash flow statement, we classify the tax benefit from the exercise of stock options as a financing cash inflow. | Analytical Implications of Employee Stock-Based Compensation, December 2002 (#76852) |
| Hybrid securities | To classify securities with characteristics of both debt and equity following Moody's classification scheme, which sometimes differs from the GAAP treatment. We adjust interest expense, dividends and related cash flows consistent with our classification of the hybrid security. | Moody's Tool Kit: A Framework for Assessing Hybrid Securities, December 1999 (#49802)<br><br>Hybrid Securities Analysis — New Criteria for Adjustment of Financial Ratios to Reflect the Issuance of Hybrid Securities, November 2003 (#79991)<br><br>Refinements to Moody's Tool Kit: Evolutionary, not Revolutionary!, March 2005 (#91696)<br><br>**See: Standard Adjustment #6 — Hybrid Securities for changes to the November 2003 methodology** |
| Securitizations | To adjust the sponsor's accounting for securitizations that do not fully transfer risk and that are accounted for as sales of assets. Moody's views those transactions as collateralized borrowings. | Securitization and its Effect on the Credit Strength of Companies: Moody's Perspective 1987-2002, March 2002 (#74455)<br><br>Changing the Paradigms: Revised Financial Reporting for Special Purpose Entities, May 2002 (#74947)<br><br>Demystifying Securitization for Unsecured Investors, January 2003 (#77213) |
| Inventory on a LIFO cost basis | To adjust inventory recorded on a LIFO cost basis to FIFO value. We do not adjust the income statement, believing that cost of goods sold on a LIFO basis is a superior method of matching current costs with revenues. | *** |
| Unusual and non-recurring items | To reclassify the effects of unusual or nonrecurring transactions and events to a separate category on the income and cash flow statements. Our analytical ratios that include income or operating cash flows generally exclude amounts in those separate categories. | *** |

****Moody's has not published Methodologies or Special comments on this adjustment*

In addition to the Standard Adjustments, Moody's may also make non-standard adjustments to financial statements for other matters to better reflect underlying economics and improve comparability with peer companies. For example, analysts may adjust financial statements to reflect estimates or assumptions that they believe are more prudent for credit analysis.

In most cases we can compute our Standard Adjustments based on public information. In contrast, we compute non-standard adjustments using public or private information. Despite our goal of transparency related to adjustments, we are obviously restricted in what we are able to publish related to adjustments that we base on private information.

## Standard Adjustment #1: Defined Benefit Pensions

There are two types of defined benefit pension schemes — "pre-funded" schemes where companies are required to set aside assets in a separate trust to fund future benefits and "unfunded" schemes where companies are not required and elect not to set aside assets in a separate trust. Part 1 of our discussion of this adjustment addresses both types of schemes. Part 2 addresses an incremental adjustment that is unique to unfunded plans. In circumstances where a company starts to voluntarily pre-fund a previously unfunded pension obligation, Moody's will continue to treat the arrangement as unfunded until the plan assets amount to 75% of the PBO, or are expected to reach this level in the near future.

### THE REPORTING PROBLEM — PART 1

Current accounting standards often fail to recognize or fully recognize on the sponsor's balance sheet its economic obligation to its pension trust and employees because of extensive artificial smoothing mechanisms permitted in pension accounting. Artificial smoothing also distorts the measurement of pension expense. The smoothing mechanisms permit the deferral of large losses and gains, which can result in incongruous reporting such as:

- Recording pension income during a period when the economic status of the plan deteriorates, and
- Recording pension related assets on the balance sheet when the pension plan is underfunded

On the cash flow statement, standards require companies to classify cash contributions to the pension trust as an operating cash outflow in the cashflow statement, including the portion that is reducing plan underfunding, which arguably represents the reduction of debt. As a result, cash from operations (CFO) is diminished for a contribution to the trust that is more akin to a financing activity.

### MOODY'S ANALYTICAL RESPONSE — PART 1

Moody's believes that a sponsor's balance sheet should reflect a liability equal to the underfunded status of the pension plan (except as noted in Part 2 below for unfunded schemes). We measure that liability at the balance sheet date as the excess of the actuarially determined projected benefit obligation (PBO)[5] over the fair value of assets in the pension trust.

Because of the contractual nature of pension obligations, we view the pension liability as "debt - like". Thus, we classify it as debt on the balance sheet and include it in the computation of ratios that use debt. We also record a related deferred tax asset which tempers the impact of our debt adjustment on equity. Because of the inherent uncertainty in the timing and amount of future tax deductions, it is Moody's standard practice to present liabilities before any anticipated tax benefits.

On the income statement, our goal is to report pension expense absent the effects of artificial smoothing, such as the amortization of prior service cost and actuarial gains and losses. We view pension expense to equal the year's service cost, plus interest on the gross pension obligation (PBO), minus actual earnings on plan assets[6]. However, volatility in the performance of the pension plan assets is not reflected in EBIT because Moody's excludes the caption "other non-recurring expense" from EBIT.

On the cash flow statement, we view cash contributions to the pension trust in excess of service cost as the repayment of (pension) debt.

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS — PART 1

The following table describes Moody's adjustments related to underfunded defined benefit pension obligations. Worksheet A in the Appendix provides the detail underlying the calculations.

5. *Some argue that a better measure of the pension obligation is the accumulated benefit obligation, or ABO. Unlike PBO, ABO does not assume future compensation increases for employees. Moody's believes that PBO is the better measure for a company that is a going concern.*
6. *We limit the amount of gains on assets to the amount of interest to avoid recording pension income that is probably not sustainable. Also, in general, plan sponsors cannot utilize the gain on pension plan assets to satisfy non-pension related obligations and the monetization of plan assets may give rise to significant tax penalties.*

**Table 2: Standard Adjustments for Underfunded Defined Benefit Pensions**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet by recording as debt the amount by which the defined benefit pension obligation is unfunded or underfunded. Our adjustment:<br>• recognizes the unfunded or underfunded pension obligation (PBO - FMV of assets)) as debt, and<br>• removes all other pension assets and liabilities recognized under GAAP. |
| **Income Statement** | We adjust pension expense to eliminate smoothing, and exclude net periodic pension income. Moody's:<br>• reverses all pension costs;<br>• recognizes the service cost, which Moody's considers the best estimate of the operating cost of the pension plan (in proportion to COGS, Operating Expenses and SG&A);<br>• recognizes interest cost on the PBO in other non-recurring income/expense;<br>• attributes interest expense to pension-related debt, which we reclassify from other non-recurring income/ expense to interest expense;<br>• adds or subtracts actual losses or gains on pension assets (but only in an amount up to the interest cost after attributing interest expense to pension-related debt) in other non-recurring income/expense. |
| **Cash Flow Statement** | We adjust the cash flow statement to:<br>• recognize only the service cost as an outflow from cash from operations (CFO), and<br>• reclassify employer cash pension contributions in excess of the service cost from an operating cash outflow (CFO) to a financing cash outflow (CFF)<br>• We do not adjust the cash flow statement if pension contributions are less than the service cost. |

The most critical assumptions in pension accounting often relate to the discount rate used to assess the present value of future payments and the assumed returns on pension assets. Where these assumptions appear unsustainable or significantly different than those of a company's peers, we will often investigate the reasons why management chose those assumptions. The explanation may cause us to change our adjustment or provide other insight into credit risk. For example, if we conclude that the discount rate is aggressive, we may request that management calculate PBO using a lower rate and base our pension adjustment on that calculation. As another example, understanding the reason for a high expected rate of return on assets[7] could provide us with insight into the nature and risk of the assets in the pension trust.

## THE REPORTING PROBLEM — PART 2

For countries such as Germany and Austria with an unfunded pension system, there are a number of significant differences compared to pre-funded schemes. In particular unfunded pension arrangements:

- Result in the inclusion of the gross pension obligation (in place of the net obligation) on the balance sheet;
- Typically have no statutory requirement for cash pre-funding of the gross obligation; and
- Allow a long time horizon to deal with the actual funding of pension payments which provides the sponsoring companies with a choice of how to meet their obligations.

## MOODY'S ANALYTIC RESPONSE — PART 2

For unfunded pension plans, Moody's considers the PBO to be only partially "debt - like". To improve comparability with pre-funded pensions, Moody's simulates a pre-funding of pension obligations for companies that are not required to pre-fund. Given the long-term horizon for payment of pension obligations and the general predictability of the payment streams, the company will likely have time to secure the necessary financing. In cases where the company has the ability to easily access the capital markets, Moody's assumes that management's targeted debt and equity mix will be used to fund future pension obligations.

Consequently, for unfunded pensions, an additional adjustment is made to the balance sheet to incorporate an "equity credit" which reduces the amount of the gross pension obligation (PBO) that would otherwise be added to debt. However, excess liquid funds reduce the likelihood of additional equity being raised and the equity credit is therefore calculated after the excess liquid funds have been deducted from the PBO. Excess liquid funds are discretionary amounts of cash and marketable securities that exceed day-to-day needs for operations. For industrial companies, these day-to-day cash needs would typically be estimated at 3% of revenues, depending on the complexity of the company's payment streams and the efficiency of its cash management systems.

Moody's does not further adjust the income statement or the cash flow statement for companies with unfunded pension obligations, other than to align the interest expense with the adjustment to debt described in the previous paragraph. The remaining interest cost on the PBO is included in other non-recurring expense.

*7. Note that the assumed rate of return on pension assets is irrelevant to our pension-related adjustments.*

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS — PART 2

The following table describes Moody's adjustment related to unfunded defined benefit pension obligations. Worksheet A in the Appendix provides the detail underlying the calculations.

**Table 2a: Standard Adjustments for Unfunded Defined Benefit Pensions**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to record an "equity credit" that simulates funding of the company's unfunded PBO. Our adjustment:<br>• reverses a portion of the debt recognized in Part 1 of our adjustment for defined benefit pension plans, and<br>• recognizes a corresponding increase in equity. |
| **Income Statement** | We do not further adjust the income statement for unfunded pension plans, other than to align the interest expense with our adjustment to debt. |
| **Cash Flow Statement** | We do not further adjust the cash flow statement for unfunded pension plans. |

## Standard Adjustment #2: Operating Leases

### THE REPORTING PROBLEM

Accounting standards distinguish between capital and operating leases, and the accounting for the two is very different. Accounting standards view capital leases as the acquisition of a long-term property right and the incurrence of debt. During the lease term, companies amortize the capitalized property right and divide the lease payment between interest expense and the repayment of debt. In contrast, accounting standards view operating leases as executory (off-balance sheet) contracts that are generally accounted for on a pay-as-you-go basis. That is, companies simply recognize the lease payments as lease expense on the income statement and as an operating cash outflow on the cash flow statement.

For operating leases, companies don't recognize debt even though they are contractually obligated for lease payments and a failure to make a lease payment often triggers events of default, as if the obligation were debt. Further, in the eyes of lenders, incurring operating lease obligations reduces a company's borrowing capacity. Finally, in the absence of a lease financing option, the company would likely borrow the money and buy the asset; an illustration of this fact can be seen in the number of companies across industries that are selling and leasing back the same assets.

Further, accounting standards distinguish between capital and operating leases using arbitrary bright line tests. As a result, companies structure transactions to achieve certain accounting, and, at the margin, the economic distinction between capital and operating leases is insignificant even though the accounting is very different. This results in non-comparability between companies that account for similar economic transactions differently and between companies that lease assets versus those that buy them.

### MOODY'S ANALYTICAL RESPONSE

Our analytic goal is to simulate a company's financial statements assuming it had bought and depreciated the leased assets, and financed the purchase with a like amount of debt. Moody's approach entails adjustments to the balance sheet, income and cash flow statements.

We will apply a multiple to current rent expense to calculate the amount of the adjustment to debt. This methodology has been used in the past, as many analysts applied an 8x rent factor to assess a company's effective leverage. The 8x rent factor, while providing a quick thumbnail estimate, assumes a certain interest rate (6%) on a piece of capital equipment with a long useful life (15 years), and is not appropriate for all lease types. To accommodate a wider array of useful lives and interest rates, we have expanded the number of rent factors to 5x, 6x, 8x and 10x. For consistency, we will generally use the same multiple for companies by sector of activity. But in no event will we capitalize operating leases at less than the present value of the future lease payments (discounted by the long-term borrowing rate).

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustments to capitalize operating leases. Worksheet B in the Appendix provides the detail underlying the calculations.

**Table 3: Standard Adjustments for Operating Leases**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet by adding both debt and fixed assets (usually gross plant, property and equipment). We compute this debt by multiplying current rent expense by a factor of 5x, 6x, 8x, or 10x, or, if the present value (PV) of the minimum lease commitments (using the incremental borrowing rate as the discount rate) is higher, we will use the PV. |
| **Income Statement** | We adjust the income statement using market convention to reclassify one-third of the rent expense to interest expense and the remaining two-thirds rent to "Depreciation - Capitalized Operating Leases" (a component of operating profit), and we adjust operating expenses (or cost of goods sold and selling, general & administrative expenses) proportionally. |
| **Cash Flow Statement** | We adjust the cash flow statement to reclassify the principal portion of lease payments from operating cash flow (CFO) to a financing cash outflow (CFF). We also simulate capital expenditure for newly acquired leased assets by increasing the capital expenditures line in investing cash flows (CFI) with a concomitant borrowing in CFF to fund the capital expenditures. |

## Standard Adjustment #3: Capitalized Interest

### THE REPORTING PROBLEM

Analysts typically wish to separately analyze the operations of a business from the financing of that business. This separation enables a more accurate portrayal of business operations, which is often the primary source of cash to repay debt.

However, accounting standards sometimes commingle operating and financing activities. One prominent example is capitalized interest, where, under certain circumstances, GAAP requires that a company capitalize interest cost as a part of property, plant and equipment (PP&E). In the year a company capitalizes interest, reported capital assets, income and cash flow from operations are all increased relative to what would have been reported had the company expensed all interest.

### MOODY'S ANALYTICAL RESPONSE

Moody's views capitalized interest as a cost for obtaining financing (i.e. interest expense) and believes that analysis of interest coverage should expense when incurred all interest cost regardless of whether a company recognizes that cost as an expense on its income statement or as an asset on its balance sheet. This requires modification to the balance sheet, income and cash flow statements.

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustments to expense interest capitalized. Worksheet C in the Appendix provides the detail underlying the calculations.

**Table 4: Standard Adjustments for Capitalized Interest**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to:<br>• reduce PP&E by the amount of interest capitalized during the period *<br>• adjust deferred taxes, and<br>• reduce retained earnings by the after-tax cost of the additional interest expense recognized on the income statement |
| **Income Statement** | We adjust the income statement to:<br>• increase interest expense by the amount of capitalized interest during the current period, and<br>• reduce applicable tax expense. |
| **Cash Flow Statement** | We adjust the cash flow statement to reclassify capitalized interest from capital expenditures, an investing cash outflow (CFI), to interest expense, an operating cash outflow (CFO). |

** While in concept we should adjust for the cumulative effect of interest capitalized in all prior periods, for practical reasons we focus on only interest capitalized during a year. Those reasons include the difficulty of the calculation and that the cumulative treatment would rarely, if ever, be material to our rating.*

## Standard Adjustment #4: Employee Stock Compensation

### THE REPORTING PROBLEM

Most US companies do not yet expense employee stock options (ESOs), although many do so. New US GAAP rules (now delayed until January 1, 2006 for calendar reporters) will require all companies to expense ESOs, and will ultimately improve comparability. Until then, financial statements are not comparable, for two reasons. First, companies that fail to expense ESOs are not comparable to those that do. Second, companies that fail to expense ESOs are not comparable to companies that do not compensate their employees with ESOs.

Additionally, US companies, whether or not they expense ESO's on their income statement, receive a US tax deduction for the difference between the exercise price and the strike price upon exercise of ESO's and the effect is a reduction in taxes payable. Current accounting rules treat the reduction in the tax liability as an increase in cash flow from operations. However, the amount of the tax benefit can fluctuate materially depending on the company's stock price, option terms and employee preferences. Tax benefits may be non-sustainable, particularly when the company is under stress and its stock price declines.

### MOODY'S ANALYTICAL RESPONSE

Moody's believes that employee stock options are a form of compensation that should be expensed for purposes of analysis. Additionally, despite the fact that accounting guidance treats the reduction in the tax benefits related to ESO's as an increase to operating cash flow in the cash flow statement, Moody's believes that the tax benefit from stock option exercises is best viewed as a financing cash inflow (CFF), since the tax benefit:

1. relates to the issuance of an equity instrument,
2. is often non-recurring and highly volatile since it fluctuates depending on the company's stock price, the terms of the options plan and employee behavior,
3. would be classified with the cash outflow for share repurchases made to avoid dilution from stock options, and
4. would likely disappear when the company is under stress and employees don't exercise stock options.

We will adjust financial statements through December 31, 2005 when new accounting rules take effect that will level the playing field among companies.

For purposes of this adjustment, Moody's relies upon footnote disclosures relating to the value of the options and related pro-forma disclosures.

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustments to record the effects of employee stock compensation. Worksheet D in the Appendix provides the detail underlying the calculations.

**Table 5: Standard Adjustments for Employee Stock Compensation**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet as if the stock options had been recorded as an expense. Our adjustments:<br>• reduce retained earnings by the amount of after-tax pro-forma stock compensation expense; and<br>• increase common stock as if stock had been issued; and<br>• reduce deferred tax liabilities due to the decrease in tax expense. |
| **Income Statement** | We adjust the income statement as if the company expensed stock options. Our adjustment:<br>• increase SG&A expense by the amount of "pre-tax" pro-forma stock compensation expense; and<br>• reduce tax expense by the amount of the incremental tax rate times the pre-tax pro-forma stock compensation expense. |
| **Cash Flow Statement** | We adjust the cash flow statement to reclassify the tax benefit from stock option exercises from an operating cash inflow (CFO) to a financing cash inflow (CFF). |

## Standard Adjustment #5: Hybrid Securities

### THE REPORTING PROBLEM

Although accounted for as debt, equity or minority interest, hybrid securities have characteristics of both debt and equity instruments. For some instruments, accounting standards focus on legal form, even though the economics of these instruments suggest a different classification. For example, standards classify certain preferred stocks as 100% equity, even though these instruments have important attributes of debt.

### MOODY'S ANALYTICAL RESPONSE

Since hybrid securities are generally not pure debt or pure equity, Moody's places a particular hybrid security on a debt - equity continuum. We assign weights to the debt and equity components of a hybrid based on the security's particular features. The weights determine where it lies on the continuum. As a result, for example, Moody's may view a particular hybrid as 75% debt and 25% equity, while accounting standards may classify the instrument as 100% equity.

On the balance sheet we classify the instrument in accordance with the weights we assign to its equity and debt features:

| Basket | Debt Component | Equity Component |
|---|---|---|
| **A** | 100% | 0% |
| **B** | 75% | 25% |
| **C** | 50% | 50% |
| **D** | 25% | 75% |
| **E** | 0% | 100% |

Often this requires an adjustment from the classification in current accounting, which often classifies instruments as all debt or all equity, or in some cases, minority interest.

We also adjust the income statement to reflect interest expense or dividends, depending on our balance sheet classification. For example, if we deem a portion of a debt instrument as "equity - like", Moody's reclassifies the ratable amount of interest expense to dividends. Conversely, if we deem a portion of an equity instrument as "debt - like", Moody's reclassifies the ratable amount of dividends to interest expense.

We apply similar thinking to the cash flow statement, again reflecting cash outflows as interest or dividends depending on our balance sheet classification.

In a change from Moody's previous methodology, "Hybrid Securities Analysis," November 2003[8], we will adjust financial statements for hybrid securities and calculate ratios in the same manner for both investment grade and non-investment grade issuers.

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustments related to hybrid securities. Worksheet E in the Appendix provides the detail underlying the calculations.

**Table 6: Reclassification to Equity for Hybrid Securities Classified as Debt**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to reclassify to equity (i.e. preferred stock) hybrid securities classified as debt, based on the hybrid basket treatment assigned to the particular hybrid security |
| **Income Statement** | We adjust the income statement to reclassify interest expense to preferred dividends for the calculated equity portion of hybrid securities based on the hybrid basket treatment |
| **Cash Flow** | We adjust the cash flow statement to reclassify interest expense (an operating cash outflow) to preferred dividends (a financing cash outflow) for the calculated equity portion of hybrid securities based on the hybrid basket treatment. |

8. *Hybrid Securities Analysis: New Criteria for Adjustment of Financial Ratios to Reflect the Issuance of Hybrid Securities, November 2003, established that fixed charge coverage ratios would generally not be adjusted for high-grade issuers while coverage ratios for lower-rated issuers would be calculated both with and without hybrid coupons that are deferrable, payable-in-kind, or payable in common stock. In a change from this methodology, Moody's now adjusts financial statements for hybrid securities depending on the basket designation and calculates ratios in the same manner for both investment grade and non-investment grade issuers.*

| Table 7: Reclassification to Debt for Hybrid Securities Classified as Equity | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to reclassify to debt (i.e. subordinated debt) hybrid securities classified as equity, based on the hybrid basket treatment assigned to the particular hybrid security. |
| **Income Statement** | We adjust the income statement to reclassify preferred dividends to interest expense for the calculated debt portion of hybrid securities based on the hybrid basket treatment. |
| **Cash Flow Statement** | We adjust the cash flow statement to reclassify preferred dividends (a financing cash outflow) to interest expense (an operating cash outflow) for the calculated debt portion of hybrid securities based on hybrid basket treatment. |

Accounting standards classify certain hybrid instruments as neither debt nor equity, but as minority interest. In contrast, we reclassify these hybrids proportionally to debt and equity as determined by the weightings assigned in accordance with the hybrid securities continuum. We also adjust the income and cash flow statements for these securities, consistent with our classification on the balance sheet.

## Standard Adjustment #6: Securitizations

### THE REPORTING PROBLEM

Companies often report as a sale the transfer of assets, such as receivables, to securitization trusts, following accounting rules that are largely based on legal form. However, in many of these securitizations accounted for as sales:

1. the company sponsor retains key risks related to the assets transferred to the securitization trust,
2. the company, to maintain market access for future securitization, would be "economically compelled" to rescue a prior securitization transaction, or
3. in the event that the company lost access to the securitization market, the types of assets normally securitized would quickly accumulate on the sponsor's balance sheet, through the company's normal business activities, and require alternative funding.

These facts, if present, raise complex questions about whether the analyst covering a non-financial corporation should view the securitization as a sale of assets or a borrowing collateralized by assets. The accounting and resulting numbers related to the company's financial leverage and cash flows differ significantly depending upon which view the analyst accepts.

For example, if the transaction is viewed as a sale, then the analyst accepts the accounting. That accounting removes the assets from the company's balance sheet and recognizes no debt related to the transaction. On the cash flow statement, the company classifies cash inflow from the sale of receivables in cash from operations.

However, if the transaction is viewed as a collateralized borrowing, then the analyst adjusts the company's balance sheet to record debt for the proceeds from the securitization and to include the receivables or other assets that the company securitized. On the cash flow statement, the analyst reclassifies cash inflow from the transaction from cash from operations (CFO) to cash from financing activities (CFF), viewing the proceeds as borrowing.

Accounting standards that treat collateralized borrowings as sales result in non-comparable reporting among companies. Companies that borrow from traditional sources appear different from those that borrow through securitization transactions, even though the economics of the borrowings may be similar.

### MOODY'S ANALYTICAL RESPONSE

Moody's views securitization transactions that do not fully transfer risk as collateralized borrowings. In nearly all of the securitizations we have reviewed to date, company sponsors have retained significant risks related to the assets transferred. In those cases, we adjust the financial statements of companies that report securitizations as sales to reflect the transactions as collateralized borrowings.

### HOW MOODY'S ADJUSTS FINANCIAL STATEMENTS

The following table describes Moody's adjustments for securitizations that sponsors report as sales but that do not fully transfer risk. Worksheet F in the Appendix provides the detail underlying the calculations.

**Table 8: Standard Adjustments for Securitizations**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to increase debt by the ending balance of uncollected or unrealized assets that the company sponsor transferred in the securitization arrangement as of the balance sheet date. We also increase assets of the appropriate category by the same amount. |
| **Income Statement** | We impute interest expense on the amount of additional debt recognized, at the borrowing rate implicit in the company's securitization arrangement or the company's short-term borrowing rate, and reduce other expense by the same amount. Thus, our adjustment does not affect reported net income |
| **Cash Flow** | We adjust the cash flow statement to reclassify amounts in the cash from operations (CFO) and cash from financing (CFF) categories:<br>• upon the initial transfer of assets, we reclassify the cash inflow from operating cash flow (CFO) to financing cash flow (CFF).<br>• for each subsequent period, we base the amount of reclassification on changes in uncollected or unrealized sponsor assets in the securitization arrangement from the beginning to the end of the period. For example if the amount of uncollected receivables in the securitization:<br>  • increases from the beginning to the end of the year, we reclassify the amount of that increase from cash inflow from operations (CFO) to cash inflow from financing activities (CFF).<br>  • decreases from the beginning to the end of the year, we increase cash from operations (CFO) by that amount and decrease cash from financing activities (CFF). |

## Standard Adjustment #7: Inventory on a LIFO Cost Basis

### THE REPORTING PROBLEM

LIFO (last-in-first-out) cost method for carrying inventories on the balance sheet is an accounting choice under US and Canadian GAAP and is not an acceptable accounting method under other GAAPs, including international accounting standards. In periods of rising prices, the LIFO method can cause the carrying value of inventory on the balance sheet to be well below FIFO (first-in-first-out) value, replacement cost, and market value. Accordingly, the balance sheets of companies electing the LIFO cost method are not comparable to those that follow FIFO or other methods.

### MOODY'S ANALYTICAL RESPONSE

Moody's adjusts inventories that companies report on the LIFO cost method to the FIFO cost method. This adjustment improves our ability to compare a company with others. It also states inventory at a more relevant amount (the current cost of the inventory).

This adjustment only affects the balance sheet. We do not adjust the income or cash flow statements because we view cost of goods sold measured on the LIFO basis as an accurate representation of the current cost of inventories sold.

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustment to inventory measured on LIFO. Worksheet G in the Appendix provides the detail underlying the calculations.

**Table 9: Standard Adjustments for Inventory on a LIFO Cost Basis**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheet to:<br>• increase inventories by the amount of the LIFO inventory valuation reserve<br>• increase deferred tax liabilities for applicable tax effects<br>• increase retained earnings. |
| **Income Statement** | We do not adjust the income statement because we view cost of goods sold on a LIFO basis as an accurate representation of the current cost of inventories sold. |
| **Cash Flow** | We do not adjust the cash flow statement |

# Standard Adjustments #8 and #9: Unusual and Non-Recurring Items - Income and Cash Flow Statements

## THE REPORTING PROBLEM

Financial statements generally do not contain enough information about unusual or non-recurring items to meet analysts' needs for information. Although companies separately display the effects of a few non-recurring transactions and events (e.g. discontinued operations, extraordinary items, and effect of change in accounting principles), accounting standards fail to require or permit companies to separately display on the face of the statements a sufficiently broad range of unusual or non-recurring items.

Examples include:

- Unusually large transactions (creating revenues, costs or cash flows) that management does not expect to recur in the foreseeable future
- Unique transactions, such as selling real estate by a company that rarely sells real estate
- Transactions that have occurred in the past but that management expects will soon cease (for example, the tax benefits of deductible goodwill whose depreciable life is ending).

Inadequate information about the effects of unusual or non-recurring items can foster misleading impressions about key trends in financial data. For example, the revenues, gross margin and cash flows resulting from a one-time unusually large sale, if not separately considered could create a misleading impression about a company's trends in market share, revenue, income and operating cash flow.

## MOODY'S ANALYTICAL RESPONSE

Moody's captures the effects of unusual and non-recurring transactions and events in separate captions on the face of the income and cash flow statements. This enables analysts to more accurately portray trends in the underlying recurring core business. Our key financial ratios will generally exclude the effects of unusual and non-recurring transactions that we identify.

Generally, we identify unusual and non-recurring transactions and events from public disclosures, including management's discussion and analysis of operations. We may also discuss those types of transactions with management to help ensure that we have considered major items and accurately quantified their effects.

For practical reasons, we generally do not adjust the balance sheet for unusual or non-recurring items. Nevertheless, we will consider the possibility that an unusual or non-recurring item could materially affect the balance sheet, and adjust it too, if needed.

## HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

The following table describes Moody's adjustments to capture the effects of unusual and non-recurring items. Analysts use Worksheet H (unusual items - income statement) and Worksheet I (unusual items - cash flow) in the Appendix to capture the information.

**Table 10: Standard Adjustments for Unusual and Non-Recurring Items - Income and Cash Flow Statements**

| | |
|---|---|
| **Balance Sheet** | We adjust the balance sheets in those instances when it is material to our analysis. |
| **Income Statement** | We adjust the income statement to reclassify the effects of unusual or non-recurring revenues, gains or costs, net of the related tax effect, to a special income statement caption that is below net profit after tax. Our computation of key ratios excludes amounts in the special income statement caption. |
| **Cash Flow Statement** | We adjust the cash flow statement to reclassify the effects of unusual or non-recurring operating cash inflows and outflows to a special caption in the operating section of the cash flow statement. Our computation of key ratios excludes amounts in the special cash flow statement caption. |

## Changes to Standard Adjustments

Over time, we may modify our standard adjustments as global reporting issues evolve. If so, we will alert readers of our research and, where appropriate, solicit comment prior to doing so and will update this methodology.

## Appendix — Adjustment Worksheets

Attached are worksheets that show the calculations underlying each of the adjustments.

| Worksheet | Adjustment |
|---|---|
| A | Underfunded/Unfunded defined benefit pensions |
| B | Operating leases |
| C | Capitalized Interest |
| D | Employee stock compensation |
| E | Hybrid securities |
| F | Securitizations |
| G | Inventory on a LIFO cost basis |
| H | Unusual and non-recurring items - income statement |
| I | Unusual and non-recurring items - cash flow statement |
| J | Non-standard adjustment - public information |

## Adjustment: Pensions — Worksheet (A) (US GAAP version)

**Background**

Moody's believes that a sponsor's balance sheet should reflect a liability equal to the under funded status of its defined benefit pension plan. We measure that liability at the balance sheet date as the excess of the actuarially determined projected benefit obligation (PBO) over the fair value of assets in the pension trust. To improve comparability with pre-funded pensions, Moody's simulates a pre-funding of pension obligations for companies that are not required to pre-fund. Consequently, for unfunded pension plans, the PBO is only partly considered as "debt-like." On the income statement, our goal is to report pension expense absent the effects of artificial smoothing, such as the amortization of prior service cost and actuarial gains and losses. We view pension expense to equal the year's service cost, plus interest on the gross pension obligations (PBO), minus actual earnings on plan assets. On the cash flow statement, we view cash contributions in excess of service cost as the repayment of (pension) debt.

**Company:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Pension Disclosure Information (Common Input for Both Underfunded and Unfunded Plans)**

| | | |
|---|---|---|
| Projected Benefit Obligation (End of Year) | | **(a)** |
| Fair Value of Plan Assets (End of Year) | | **(b)** |
| Net Periodic Pension Benefit Cost (Income) | | **(c)** |
| Service Cost | | **(d)** |
| Interest Cost | | **(e)** |
| Actual Return on Plan Assets | | **(f)** |
| Employer Contributions | | **(g)** |
| Pension Asset Recorded | | **(h)** |
| Pension Liability Recorded | | **(i)** |

← from the "Pension" note included in the financial statement footnotes

Indicate accounts where amounts are recorded

| Account # | Account Description |
|---|---|
| | |
| | |

**Step 2 - Additional Pension Disclosure Information for Unfunded Pension Plans**

| | | |
|---|---|---|
| Unfunded Projected Pension Benefit Obligation (End of Year) | | **(j)** |
| Service Cost for Unfunded Pensions (excl OPEB - if disclosed) | | **(k)** |

from the "Pension" note included in the financial statement footnotes

**Step 3 - Other Disclosure Information Used in Calculations:**

**a. Common Input for Both Underfunded and Unfunded Plans**

| | | | |
|---|---|---|---|
| Cost of Goods/Products/Services Sold | - | **(l) *** | |
| Operating Expenses | - | **(m) *** | |
| Selling, general and administrative expenses | - | **(n) *** | |
| Incremental LT Borrowing Interest Rate | - | **(o) *** | FROM "MANDATORY SUPPLEMENTAL INFO" |
| Incremental Tax Rate | - | **(p) *** | FROM "MANDATORY SUPPLEMENTAL INFO" |

**b. Additional Input for Unfunded Plans**

| | | | |
|---|---|---|---|
| Analyst Estimate: "Ideal" Percentage of Debt to Debt + Equity | - | **(q)** | |
| Analyst Estimate: "Excess" cash related to *unfunded* pensions | - | **(r)** | Guideline: Excess cash = Liquid funds less 3% of sales. Excess cash should not exceed the unfunded pension obligation (l) |

**Step 4 - Adjustments**

| ***(A)-1*** *(Balance Sheet) (If Plan is Unfunded or Underfunded)* | **Debit** | **(Credit)** | | |
|---|---|---|---|---|
| Accumulated Other Comprehensive Income | **$ -** | **$ -** | | **= (h) - (i) - (s) - (t)** |
| Deferred Tax Liabilities | **-** | **-** | **(s)** | **= [(h) - (i) - (t)] x (p)** |
| Pension Liabilities Recorded | **-** | **-** | | **= (i)** |
| Pension Assets Recorded | **-** | **-** | | **= (h) x -1** |
| Bonds/Senior Debt | **-** | **-** | **(t)** | **= If (a) - (j) > (b) then (b) - (a) else (j) x -1** |

**Purpose:** *To record underfunded and unfunded pension balance as debt.*

| ***(A)-2*** *(Balance Sheet - Unfunded Pensions)* | | | | |
|---|---|---|---|---|
| Senior Debt | **$ -** | **$ -** | **(u)** | **= [(j) - (r)] x [1 - (q)]** |
| Total Retained Earnings | **-** | **-** | | **= (u) x -1** |

**Purpose:** *To give equity credit to a portion of the company's unfunded pension liability.*

| ***(A)-3*** *(Income Statement)* | | | | |
|---|---|---|---|---|
| Cost of Goods/Products/Services Sold | **$ -** | **$ -** | | **= [(d) - (c)] x [(l) / [(l) + (m) + (n)]]** |
| Operating Expenses | **-** | **-** | | **= [(d) - (c)] x [(m) / [(l) + (m) + (n)]]** |
| Selling, general and administrative expenses | **-** | **-** | | **= [(d) - (c)] x [(n) / [(l) + (m) + (n)]]** |
| Other Non-Recurring Expenses/(Gains) | **-** | **-** | **(v)** | **= If (e) - (w) > (f) then (e) - (w) - (f)** |
| Interest Expense | **-** | **-** | **(w)** | **= [(u) + (t)] x (o) x -1** |
| Taxes | **-** | **-** | **(x)** | **= [(d) - (c) + (v) + (v)] x (p) x -1** |
| Unusual & Non-Recurring Items - Adjust. After-tax | **-** | **-** | | **= [(d) - (c) + (v) + (w) + (x)] x -1** |

**Purpose:** *To properly reflect pension costs on the Income Statement*

| ***(A)-4*** *(Cash Flow Statement)* | **Source** | **(Use)** | |
|---|---|---|---|
| Changes in Other Oper. Assets & Liabilities - LT | **$ -** | **$ -** | **If (g) > (d) - (k) then (g) - [(d) - (k)]** |
| Other Financing Activities | **-** | **-** | |

**Purpose:** *To align cash flow treatment of underfunded pension costs with balance sheet treatment.*

## Adjustment: Leases — Worksheet (B)

**Background**

For operating leases, companies do not recognize debt even though they are contractually obligated for lease payments and a failure to make a lease payment often triggers events of default, as if the obligation were debt. Further, in the eyes of lenders, incurring operating lease obligations reduces a company's borrowing capacity and in the absence of a lease financing option, the company would likely borrow the money and buy the asset. To address the problems listed above, Moody's treats all leases as capital leases and adjusts the balance sheet income statement and cash flow statement accordingly. Our adjustment is calculated using a multiple of rent expense, but in no case should the operating lease liability be lower than the present value of lease commitments.

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Use Multiple to Calculate Capitalized Lease Obligation**

| | | |
|---|---|---|
| Current Year Rent Expense | | **(a)** |
| Multiple of Rent to be used to calculate debt: | - | **(b)** |
| Multiple x Rent Expense | | **(c) = (a) x (b)** |

**Step 2 - Use Minimum Lease Commitments to Calculate Present Value**

| | | |
|---|---|---|
| Incremental LT Borrowing Interest Rate | | **(d)** |
| | **Disclosure of Minimum Lease Commitments** | |
| Year 1 (next fiscal year) | - | **(e)** |
| Year 2 | - | |
| Year 3 | - | |
| Year 4 | - | |
| Year 5 | - | |
| Thereafter | - | |
| Sum of Minimum Lease Commitments | | |
| PV of Lease Commitments | - | **(f)** |

**Step 3 - Calculate Adjustment to Debt / PP&E, Interest Expense, and Depreciation Expense**

| | | | |
|---|---|---|---|
| Incremental Debt and Addition to PP&E | **(g)** | - | Greater of Multiple x Rent Expense **(c)** and PV of Minimum Lease Commitments **(f)** |
| Depreciation Component of Rent Expense | **(h)** | - | Current Year Rent Expense **(a)** x ⅔ |
| Interest Component of Rent Expense | **(i)** | - | Current Year Rent Expense **(a)** x ⅓ |

**Step 4 - Other Disclosure Information and Analyst Estimates Used in Calculations:**

| | | |
|---|---|---|
| Cost of Goods/Products/Services Sold | - | **(j)** |
| Operating Expenses | - | **(k)** |
| Selling, general and administrative expenses | - | **(l)** |

**Step 5 - Adjustments**

| | Debit | (Credit) | |
|---|---|---|---|
| ***(B)-1*** *(Balance Sheet)* | | | |
| Gross Plant | $ - | $ - | (g) |
| Capitalized Leases (Gross) | | - | (g) x -1 |
| Current portion of long-term debt | | - | (e) x ⅔ x -1 |
| Less: Current Maturities | - | | (e) x ⅔ |
| **Purpose:** *To recognize capitalized lease obligation and addition to PP&E.* | | | |
| ***(B)-2*** *(Income Statement)* | | | |
| Interest Expense | $ - | $ | (i) |
| Cost of Goods/Products/Services Sold | | - | (i) x [(j) / [(j) + (k) + (l)]] x -1 |
| Operating Expenses | | - | (i) x [(k) / [(j) + (k) + (l)]] x -1 |
| Selling, general and administrative expenses | | - | (i) x [(l) / [(j) + (k) + (l)]] x -1 |
| Depreciation - Capitalized Operating Leases | - | | (h) |
| Cost of Goods/Products/Services Sold | | - | (h) x [(j) / [(j) + (k) + (l)] x -1 |
| Operating Expenses | | - | (h) x [(k) / [(j) + (k) + (l)] x -1 |
| Selling, general and administrative expenses | | - | (h) x [(l) / [(j) + (k) + (l)] x -1 |
| **Purpose:** *To reclassify rent expense into interest and depreciation expense.* | | | |
| | **Source** | **(Use)** | |
| ***(B)-3*** *(Cash Flow Statement)* | | | |
| Depreciation & Amortization | $ - | $ | (h) |
| Long-term Debt Payments | | - | (h) x - 1 |
| Long-term Debt Proceeds | - | | (h) |
| Additions to P.P. & E. (Capital Expenditures) | | - | (h) x - 1 |
| **Purpose:** *To reclassify depreciation portion of rent expense from depreciation to a financing outflow, and a concomitant borrowing to fund capital expenditures.* | | | |

**Supporting Calculations:**

| | Disclosed Commitment | |
|---|---|---|
| Year | Minimum Lease Payments | Cumulative Minimum Lease Payments |
| 1 | - | - |
| 2 | - | - |
| 3 | - | - |
| 4 | - | - |
| 5 | - | - |
| 6 | - | - |
| 7 | - | - |

## Adjustment: Capitalized Interest — Worksheet (C)

**Background**

Under certain circumstances, GAAP requires that a company capitalize interest cost as a part of property, plant and equipment (PP&E). In the year a company capitalizes interest, reported capital assets, income and cash flow from operations are all increased relative to what would have been reported had the company expensed all interest. Moody's views capitalized interest as a cost for obtaining financing (i.e. interest expense) and believes that analysis of interest coverage should expense when incurred all interest cost regardless of whether a company recognizes that cost as an expense on its income statement or capitalized asset on its balance sheet.

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Identify the amount of interest capitalized during the period and determine whether the amount is material to our analysis:**

| | | | |
|---|---|---|---|
| Capitalized interest | - | **(a)** | |
| Interest Expense | - | **(b)** | |
| Percentage of interest capitalized to interest expense | **0.00%** | **(a) / [(a) + (b)]** | |
| Is the amount of interest capitalized considered material to our analysis? (Yes or No) | | **(c)** | ← *Typically we respond "no" if the percentage (above) is less than 5%* |

**Step 2 - Other Disclosure Information Used in Calculations:**

| | | |
|---|---|---|
| Incremental Tax Rate | 0.00% | **(d)** |

**Step 3 - Adjustments (If (c) is "Yes"):**

| | Debit | (Credit) | |
|---|---|---|---|
| ***(C)-1*** *(Balance Sheet)* | | | |
| Long-Term Deferred Tax Account | - | | **(e) = (a) x (d)** |
| Total Retained Earnings | - | | **= [(f) + (e)] x -1** |
| Gross Plant | | - | **(f) = (a) x -1** |
| **Purpose:** *To adjust balance sheet to expense interest that the company capitalized during the current period.* | | | |
| ***(C)-2*** *(Income Statement)* | | | |
| Interest Expense | - | | **= (a)** |
| Taxes | | - | **(g) = (e) x -1** |
| Unusual & Non-Recurring Items - Adjust. After-tax | | - | **= [(a) + (g)] x -1** |
| **Purpose:** *To adjust income statement to expense interest that the company capitalized during the current period.* | | | |

| | Source | (Use) | |
|---|---|---|---|
| ***(C)-3*** *(Cash Flow Statement)* | | | |
| Additions to P.P. & E. (Capital Expenditures) | - | | **(a)** |
| Net Income | | - | **(e) - (a)** |
| Deferred Income Taxes | | - | **(e) x -1** |
| **Purpose:** *To reclassify capitalized interest from an investing cash out flow to an operating cash out flow on the cash flow statement.* | | | |

**Adjustment: Employee Stock-Based Compensation — Worksheet (D)**

**Background**

Most companies do not yet expense employee stock options (ESOs), although many do so. Moody's believes that employee stock options are a form of compensation that should be expensed for purposes of analysis. Additionally, despite the fact that accounting guidance treats the reduction in the tax benefits related to ESO's as an increase to operating cash flow in the cash flow statement, Moody's believes that the tax benefit from stock option exercises is best viewed as a financing cash in-flow. This adjustment will be made to financial statements through June 30, 2005, at which time new accounting rules take effect that will require all companies to expense the cost of ESOs.

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Gather information on the cost of stock-based employee compensation and determine if amounts are material:**

| | | | |
|---|---|---|---|
| Reported Net Income | - | **(a)** | ← from the Income Statement |
| Pro-Forma Net Income as if the company had expensed the cost of employee stock options | - | **(b)** | ← from the financial statement footnotes (usually note 1) |
| Percentage reduction in Net Income if the company were to have expensed the effect of employee stock options | **0.00%** | **[(a) - (b)] / (a)** | |
| Is the amount of stock compensation considered material to our analysis? (Yes or No) | | **(c)** | ← Typically we respond "no" if the percentage (above) is less than 3% |

**Step 2 - Other Disclosure Information Used in Calculations:**

| | | | |
|---|---|---|---|
| Tax benefit from stock option exercises | - | **(d)** | ← amount (if material) is disclosed on the Cash Flow Statement, Statement of Stockholders' Equity or the financial statement footnotes |
| Incremental Tax Rate | **0.00%** | **(e)** | |

**Step 3 - Adjustments:**

| | Debit | (Credit) | |
|---|---|---|---|
| ***(D)-1 (Balance Sheet / Income Statement) - If (c) is "Yes"*** | | | |
| Operating Expenses | $ - | | **(f) = [(a) - (b)] / [1 - (e)]** |
| Long Term Deferred Tax Account | - | | **(g) = (f) x (e)** |
| Retained Earnings | - | | **(h) = [(f) - (g)]** |
| Common Stock & Paid-in-Capital | | $ - | **= (f) x -1** |
| Taxes | | - | **= (g) x -1** |
| Unusual & Non-Recurring Items - Adjustments After Tax | | $ - | **= (h) x -1** |

**Purpose:** *To adjust the income statement and balance sheet as if stock options had been recorded as an expense*

| | Inflow | (Outflow) | |
|---|---|---|---|
| ***(D)-2 (Cash Flow Statement)*** | | | |
| Stock Option/Warrant Proceeds (Financing Cash Flows) | $ - | | **(d)** |
| Other Operating Cash Flows (Operating Cash Flows) | | $ - | |

**Purpose:** *To reclassify tax benefits from stock options from an operating cash inflow to a financing cash inflow*

**Adjustment: Hybrid Securities — Worksheet (E)**

**Background**

Although accounted for as debt, equity or minority interest, hybrid securities have characteristics of both debt and equity instruments. Since hybrid securities are generally not pure debt or pure equity, Moody's places a particular hybrid security on a debt – equity continuum. We assign weights to the debt and equity components of a hybrid based on the security's particular features. Often this requires an adjustment from the classification in current accounting, which often classifies instruments as all debt or all equity, or in some cases, minority interest. We also adjust the income statement to reflect interest expenseor dividends, depending on our balance sheet classification. Finally, we apply similar thinking to the cash flow statement, again reflecting cash outflows as interest or dividends depending on our balance sheet classification

**Company Name:**

**Financial Statement Period Ended:**

*Amounts in US$'000*

**Moody's Hybrid Securities Baskets:**

| Basket | Moody's % Equity | Moody's % Debt |
|---|---|---|
| A | 0% | 100% |
| B | 25% | 75% |
| C | 50% | 50% |
| D | 75% | 25% |
| E | 100% | 0% |

**Step 1 - Gather information on Hybrid Securities Classified as Debt (in the "As Reported" numbers):**

| | Amount Outstanding | Est. Interest Expense | Moody's Basket | Reclass to Equity | Reclass to Preferred Dividends | Description of Hybrid Security |
|---|---|---|---|---|---|---|
| Hybrid Security #1 | - | - | | - | - | |
| Hybrid Security #2 | - | - | | - | - | |
| Hybrid Security #3 | - | - | | - | - | |
| Hybrid Security #4 | - | - | | - | - | |
| Total Reclassifications | | | | $ - (a) | $ - (b) | |

**Step 2 - Gather information on Hybrid Securities Classified as Equity (in the "As Reported" numbers):**

| | Amount Outstanding | Dividends | Moody's Basket | Reclass to Debt | Reclass to Interest Expense | Description of Hybrid Security |
|---|---|---|---|---|---|---|
| Hybrid Security #1 | - | - | | - | - | |
| Hybrid Security #2 | - | - | | - | - | |
| Hybrid Security #3 | - | - | | - | - | |
| Hybrid Security #4 | - | - | | - | - | |
| Total Reclassifications | | | | $ - (c) | $ - (d) | |

**Step 3 - Gather information on Hybrid Securities Classified as Minority Interest (in the "As Reported" numbers):**

| | Amount Outstanding | Amount Charged to Expense | Moody's Basket | Reclass to Debt | Reclass to Interest Expense | Description of Hybrid Security |
|---|---|---|---|---|---|---|
| | (e) | (f) | | | | |
| Hybrid Security #1 | - | - | | - | - | - |
| Hybrid Security #2 | - | - | | - | - | - |
| Hybrid Security #3 | - | - | | - | - | - |
| Hybrid Security #4 | - | - | | - | - | - |
| **Total Reclassifications** | | | | **$ - (g)** | **$ - (h)** | |

**Step 4 - Adjustments:**

| | | Debit | (Credit) | |
|---|---|---|---|---|
| ***(E)-1 (Balance Sheet)*** | | | | |
| | | $ - | | Hybrid securities classified as debt in the "as reported" numbers may be included in multiple account captions on the standard chart of accounts. Analysts will need to manually enter the standard adjustment accounts effected by the adjustment and the related amounts (based on the calculation above) |
| | | - | | |
| | | - | | |
| | | - | | |
| | Preferred Stock | | $ - | **(a)** |
| **Purpose:** | *Reclassification to equity for hybrid securities classified as debt (based on the basket calculation in Step 1 - above)* | | | |
| ***(E)-2 (Balance Sheet)*** | | | | |
| | Preferred stock | $ - | | **(c)** |
| | Subordinated debt | | $ - | |
| **Purpose:** | *Reclassification to debt for hybrid securities classified as equity (based on the basket calculation in Step 2 - above)* | | | |
| ***(E)-3 (Income Statement)*** | | | | |
| | Preferred Dividends Declared | $ - | | **(b)** |
| | Interest Expense | | $ - | |
| **Purpose:** | *Adjustment of interest expense to preferred dividends for the calculated equity portion of hybrid securities classified as debt in the "As Reported" numbers (based on the basket calculation in Step 1 - above)* | | | |
| ***(E)-4 (Income Statement)*** | | **Debit** | **(Credit)** | |
| | Interest Expense | $ - | | **(d)** |
| | Preferred Dividends Declared | | $ - | |
| **Purpose:** | *Adjustments of preferred dividends to interest expense for the calculated debt portion of hybrid securities classified as equity in the "As Reported" numbers (based on the basket calculation in Step 2 - above)* | | | |

***(E)-5 (Cash Flow Statement)***

| | Inflow | (Outflow) | |
|---|---|---|---|
| Net Income (Operating Cash Flow) | $ - | | (b) |
| Cash Dividends Preferred | | $ - | |

**Purpose:** *Reclassification of interest expense (operating cash outflow) to preferred dividends (financing cash outflow) for the calculated equity portion of hybrid securities classified as debt in the "As Reported" numbers (based on the basket calculation in Step 1 - above)*

***(E)-6 (Cash Flow Statement)***

| | Inflow | (Outflow) | |
|---|---|---|---|
| Cash Dividends Preferred | $ - | | (d) |
| Net Income (Operating Cash Flow) | | $ - | |

**Purpose:** *Reclassification of preferred dividends (financing cash outflow) to interest expense (operating cash outflow) for the calculated debt portion of hybrid securities classified as equity in the "As Reported" numbers (based on the basket calculation in Step 1 - above)*

***(E)-7 (Balance Sheet)***

| | Debit | (Credit) | |
|---|---|---|---|
| Minority Interest | - | | = ∑ (e) |
| Subordinated debt | | - | = (g) x -1 |
| Preferred stock | | - | = [ ∑ (e) - (g)] x -1 |

**Purpose:** *Reclassification to debt and equity (preferred stock) for hybrid securities classified as Minority Interest (based on the basket calculation in Step 3 - above)*

***(E)-8 (Income Statement)***

| | Debit | (Credit) | |
|---|---|---|---|
| Interest Expense | $ - | | = (h) |
| Preferred Dividends Declared | - | | = ∑ (f) - (h) |
| | | - | = ( f ) x -1 |
| | | - | |
| | | - | |
| | | - | |

**Purpose:** *Adjustment of interest expense and preferred dividends for the calculated debt/equity portions of hybrid securities classified as minority interest in the "As Reported" numbers (based on the basket calculation in Step 3 - above)*

***(E)-9 (Cash Flow Statement)***

| | Inflow | (Outflow) | |
|---|---|---|---|
| | $ - | | = (f) |
| | - | | |
| | - | | |
| | - | | |
| Net Income | | - | = (h) x -1 |
| Cash Dividends - Preferred | | - | = (h) - ∑ (f) |

**Purpose:** *Reclassification of minority interest expense (operating cash outflow) or minority interest dividends (financing cash outflow) to preferred dividends (financing cash outflow) and interest expense (operating cash outflow) for the calculated equity portion of hybrid securities classified as minority interest in the "As Reported" numbers (based on the basket calculation in Step 3 - above)*

## Adjustment: Securitizations — Worksheet (F)

**Background**

Moody's views securitization transactions that do not fully transfer risk as collateralized borrowings. In nearly all of the securitizations we have reviewed to date, company sponsors have retained significant risks related to the assets transferred. In those cases, we adjust the financial statements of companies that report securitizations as sales to reflect the transactions as securitized borrowings

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Gather information about Securitization Transactions (from financial statement footnotes):**

| | | |
|---|---|---|
| Amount of uncollected/unrealized sponsor assets in the securitization arrangement at the beginning of the period | - | **(a)** |
| Amount of uncollected/unrealized sponsor assets in the securitization arrangement at the end of the period | - | **(b)** |
| Estimated average amount of uncollected/unrealized sponsor assets in the securitization arrangement during the period | - | **(c)** ← Analyst estimate based on quarterly disclosures |
| Estimated borrowing rate implicit in the company's securitization arrangement | 0.00% | **(d)** ← If rate is not known, use the company's average short-term borrowing rate |

**Step 2 - Adjustments:**

| | | Debit | (Credit) | |
|---|---|---|---|---|
| ***(F)-1 (Balance Sheet)*** | | | | |
| | Asset account to be adjusted | $ - | | **(b** ← Analyst will have to enter the name of the asset account affected |
| | Liability account to be adjusted | | $ - | |
| **Purpose:** *To recognize assets not sold and uncollateralized borrowings based on the amount of uncollected/unrealized sponsor assets in the securitization arrangement at the end of the period* | | | | |
| ***(F)-2 (Income Statement)*** | | | | |
| | Interest Expense | $ - | | **(c) x (d)** |
| | Income statement account to be used for adjustment against interest expense | | $ - | **(c) x (d) x -1** |
| **Purpose:** *To impute interest expense on the amount of unrecognized debt at the company's short-term borrowing rate* | | | | |

| | | Inflow | (Outflow) | |
|---|---|---|---|---|
| ***(F)-3 (Cash Flow Statement)*** | | | | |
| | Changes in Working Capital Items | $ - | $ - | **(a) - (b)** |
| | Net Short-term Debt Changes | - | - | **(b) - (a)** |
| **Purpose:** *To recognize the cash effects of changes in unrecognized assets and debt from the beginning to the end of the period* | | | | |

**Adjustment: Inventory - LIFO to FIFO — Worksheet (G)**

**Background**

Moody's adjusts inventories that companies report on the LIFO cost method to the FIFO cost method. This adjustment improves our ability to compare a company with others. It also states inventory at a more relevant amount (the current cost of the inventory). This adjustment only affects the balance sheet. We do not adjust the income or cash flow statements because we view cost of goods sold measured on the LIFO basis as an accurate representation of the current cost of inventories sold

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Gather Disclosure Information related to Inventories:**

| | | |
|---|---|---|
| Inventories (as reported) | **- (a)** | |
| LIFO Revaluation Reserve | - **(b)** | ← from the financial statement footnotes |
| Inventory at FIFO | **- (c) = (a) - (b)** | |

**Step 2 - Other Disclosure Information Used in Calculations:**

| | | |
|---|---|---|
| Incremental Tax Rate | 0.00% | **(d)** |

**Step 3 - Adjustments:**

| | Debit | (Credit) | |
|---|---|---|---|
| ***(G)-1 (Balance Sheet)*** | | | |
| Inventories | **$** - | | **- (e) = (b) x -1** |
| Current Deferred Tax Account | - | | **- (f) = (b) x (d)** |
| Retained Earnings | - | | **- (g) = [(e) + (f)] x -1** |

**Purpose:** *To adjust inventory on the balance sheet from a LIFO cost basis to a FIFO cost basis*

**Adjustment: Unusual Items - Income Statement — Worksheet (H)**

**Background**

Moody's captures the effects of unusual and non-recurring transactions and events in separate captions on the face of the income statement. This enables analysts to more accurately portray trends in the underlying recurring core business. Our key financial ratios will generally exclude the effects of unusual and non-recurring transactions that we identify

- To increase a reported amount, enter a positive number. For example, an analyst may want to increase Cost of Sales if he believed the reported amount was lowered by exceptionally low commodity prices that distort comparability
- To decrease a reported amount, enter a negative number. For example an analyst may want to reduce Operating Expenses if the reported results included restructuring charges which the analyst deems non-recurring

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Gather information on Unusual and/or Non-recurring Income/Gains and Expenses/Losses:**

| | | (a) | (b) | (c) | |
|---|---|---|---|---|---|
| | | Revenue/Gains | Expense/Loss | | |
| | | Increase | Taxable Increase | Non-Taxable Increase | |
| | Account Affected | (Decrease) | (Decrease) | (Decrease) | Description of Unusual Item |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|---|---|---|
| Net Pre-Tax Effect of Unusual/Non-Recurring Items | - | **(d)** ← Increase (Decrease) to EBIT [ ∑ Column (a) - ∑ Column (b) - ∑ Column (c)] |
| Income Tax Effect - (Increase) / Decrease to Income Tax Expense | - | **(e)** ← [ ∑ Column (a) - ∑ Column (b)] x (i) x -1 |
| After-Tax Effect of Unusual/Non-Recurring Items | **$** - | **(f)** |

**Step 2 - Other Disclosure Information Used in Calculations:**

Incremental Tax Rate **0.00% (i)**

**Step 3 - Adjustments:**

| | Debit | (Credit) | |
|---|---|---|---|
| ***(H)-1 (Income Statement)*** | | | |
| Unusual & Non-Recurring Items - Adjust. After-tax | - | - | **(f)** |
| Taxes | - | - | **(e) x -1** |
| Income Statement accounts to be adjusted → | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |

**Purpose:** *Reclassification unusual/non-recurring revenues/gains and expenses/losses, net of the related tax effect, to a special income statement caption*

**Adjustment: Unusual Items - Statement of Cash Flows — Worksheet (I)**

**Background**

Moody's captures the effects of unusual and non-recurring transactions and events in separate captions on the face of the statement of cash flows. This enables analysts to more accurately portray trends in the underlying recurring core business. Our key financial ratios will generally exclude the effects of unusual and non-recurring transactions that we identify.

● To increase net cash flow from operations (e.g., to reverse the impact of a significant one time litigation settlement payment), enter a positive number.

● To decrease net cash flow from operations (e.g., to reverse the impact of the receipt of significant proceeds from an insurance settlement), enter a negative number.

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Gather information on Unusual and/or Non-recurring Operating Cash Inflows and Outflows:**

| | Account Affected | Effect on Net Operating | Description of Unusual Item |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Net Effect of Unusual/Non-Recurring Items on Operating Cash Flow $ - **(a)**

**Step 2 - Adjustments:**

| | Inflow | Outflow | |
|---|---|---|---|
| ***(I)-1 (Cash Flow Statement)*** | | | |
| Unusual & Non-Recurring Items - Cash Flow Adjs | - | - | **(a)** |
| Cash Flow Statement accounts to be adjusted → | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |
| | - | - | |

**Purpose:** *Reclassification unusual/non-recurring operating cash inflows and outflows to a special caption in the operating section of the cash flow statement*

**Non-Standard Public Adjustments-- Worksheet (J)**

**Background**

Moody's may also make non-standard adjustments to financial statements for matters not covered by the standard adjustments to better reflect underlying economics and improve comparability with peer companies. This template is used for such adjustments that are based on a company's public disclosures.

**Company Name:**

**Financial Statement Period Ended:**

***Amounts in US$'000***

**Step 1 - Other Disclosure Information Used in Calculations:**

Effective Income Tax Rate **0.00%**

**Step 2 - Record Analyst Optional Adjustments:**

**Adjustment (J) - 1**

| Account Affected | (a) Assets Increase (Decrease) | (b) Liabilities Increase (Decrease) | (b) Equity Increase (Decrease) | (c) Revenue/Gains Increase (Decrease) | (d) Expense/Loss Taxable Increase (Decrease) | (e) Expense/Loss Non-Taxable Increase (Decrease) | (e) Net Income Before Unusual Increase (Decrease) |
|---|---|---|---|---|---|---|---|
| Balance Sheet or Income Statement | - | - | - | - | - | - | |
| accounts to be adjusted | - | - | - | - | - | - | |
| | - | - | - | - | - | - | |
| | - | - | - | - | - | - | |
| Retained Earnings | | | - | | | | |
| Taxes | | | | | - | | |
| Unusual & Non-Recurring Items Adjmts | | | | | | | - |

**Explanation of Entry:**

## Related Research

**Rating Methodologies:**

Analytical Observations Related to US Pension Obligations, January 2003 (#77242)

Off-Balance Sheet Leases: Capitalization and Ratings Implications, October 1999 (#48591)

Analytical Implications of Employee Stock-Based Compensation, December 2002 (#76852)

Moody's Tool Kit: A Framework for Assessing Hybrid Securities, December 1999 (#49802)

Hybrid Securities Analysis - New Criteria for Adjustment of Financial Ratios to Reflect the Issuance of Hybrid Securities, November 2003 (#79991)

Refinements to Moody's Tool Kit: Evolutionary, not Revolutionary!, March 2005 (#91696)

Changing Paradigms: Revised Financial Reporting for Special Purpose Entities, May 2002 (#74947)

**Special Comments:**

Securitization and its Effect on the Credit Strength of Companies: Moody's Perspective 1987-2002, March 2002 (#74455)

Demystifying Securitization for Unsecured Investors, January 2003 (#77213)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

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# Guideline Rent Expense Multiples for Use with Moody's Global Standard Adjustment to Capitalize Operating Leases

## Summary

In this report, we summarize by industry the multiples of rent expense that Moody's uses in connection with its Global Standard Adjustment to capitalize leases that companies account for as operating leases. The adjustment to capitalize operating leases is one of nine standard analytic adjustments embodied in companion methodologies that describe Moody's standard analytic adjustments to the financial statements of non-financial corporations that report under US or Canadian GAAP[1] and International Financial Reporting Standards[2].

For consistency, we will generally use the same multiple for companies by sector of activity (Table 2). We present these multiples to provide transparency regarding the inputs used to calculate the standard adjustment to capitalize leases for companies in different industries. The lease multiples contained in this document are intended to serve as general guidance and are not intended to override consideration of an individual issuer's circumstances. To the extent that facts and circumstances strongly warrant, the multiple of rent expense used to capitalize operating leases for an individual issuer may differ from the multiple generally used for that issuer's industry though we would expect exceptions to be rare. Nonetheless, in no event, will we capitalize operating lease commitments at less than the present value of the future lease payments (discounted by the long-term borrowing rate).

## The Standard Adjustment For Operating Leases

### THE REPORTING PROBLEM

Accounting standards distinguish between capital and operating leases, and the accounting for the two is very different. Accounting standards view capital leases as the acquisition of a long-term property right and the incurrence of debt. During the lease term, companies amortize the capitalized property right and divide the lease payment between interest expense and the repayment of debt. In contrast, accounting standards view operating leases as executory (off-balance sheet) contracts that are generally accounted for on a pay-as-you-go basis. That is, companies simply recognize the lease payments as lease expense on the income statement and as an operating cash outflow on the cash flow statement.

For operating leases, companies don't recognize debt even though they are contractually obligated for lease payments and a failure to make a lease payment often triggers events of default, as if the obligation were debt. Further, in the eyes of lenders, incurring operating lease obligations reduces a company's borrowing capacity. Finally, in the absence of a lease financing option, the company would likely borrow the money and buy the asset; an illustration of this fact can be seen in the number of companies across industries that are selling and leasing back the same assets.

1. *See Moody's Approach to Global Standard Adjustments in the analysis of Financial Statements for Non-Financial Corporation – Part I, February 2006 (#96760)*
2. *See Moody's Approach to Global Standard Adjustments in the analysis of Financial Statements for Non-Financial Corporation – Part II, February 2006 (#96729)*

Further, accounting standards distinguish between capital and operating leases using arbitrary bright line tests. As a result, companies structure transactions to achieve certain accounting, and, at the margin, the economic distinction between capital and operating leases is insignificant even though the accounting is very different. This results in lack of comparability between companies that account for similar economic transactions differently and between companies that lease assets versus those that buy them.

### MOODY'S ANALYTICAL RESPONSE

Our analytic goal is to simulate a company's financial statements assuming it had bought and depreciated the leased assets, and financed the purchase with a like amount of debt. Moody's approach entails adjustments to the balance sheet, income and cash flow statements.

We will apply a multiple to current rent expense to calculate the amount of the adjustment to debt. This methodology has been used in the past, as many analysts applied an 8x rent factor to assess a company's effective leverage. The 8x rent factor, while providing a quick thumbnail estimate, assumes a certain interest rate (6%) on a piece of capital equipment with a long useful life (15 years), and is not appropriate for all lease types. To accommodate a wider array of useful lives and interest rates, we have expanded the number of rent factors to 5x, 6x, 8x and 10x. For consistency, we will generally use the same multiple for companies by sector of activity. But in no event will we capitalize operating leases at less than the present value of the future lease payments (discounted by the long-term borrowing rate).

### HOW MOODY'S ADJUSTS THE FINANCIAL STATEMENTS

Table 1 below describes Moody's adjustments to capitalize operating leases.

**Table 1: Standard Adjustments for Operating Leases**

| | |
|---|---|
| Balance Sheet | We adjust the balance sheet by adding both debt and fixed assets (usually gross plant, property and equipment). We compute this debt by multiplying current rent expense by a factor of 5X, 6X, 8X or 10X, or, if the present value (PV) of the minimum lease commitments (using the incremental borrowing rate as the discount rate) is higher, we use the PV. |
| Income Statement | We adjust the income statement to reclassify one-third of the rent expense to interest expense and the remaining two-thirds rent to "Depreciation - Capitalized Operating Leases" (a component of operating profit), and we adjust operating expenses (or cost of goods sold and selling, general & administrative expenses) proportionally. |
| Cash Flow Statement | We adjust the cash flow statement to reclassify the principal portion of lease payments from operating cash flow (CFO) to a financing cash outflow (CFF). We also simulate capital expenditure for newly acquired leased assets by increasing the capital expenditures line in investing cash flows (CFI) with a concomitant borrowing in CFF to fund the capital expenditures. |

## Lease Multiples For Industry Peer Groups

Table 2 below depicts the multiple of rent expense used by Moody's analysts to capitalize operating leases for companies operating within the following 46 broad industries. These multiples have been arrived at through a wide consultation within Moody's global analytical teams by taking into account the particularities of each sector and the type and mix of assets that are typically leased in each industry. To the extent that sub-sectors need to be identified within these broad categories, we will on a case by case basis establish new guidelines for such sub-sectors.

**Table 2 - Multiples of Current Rent Expense by Industry**

| Industry | Multiple of Rent Expense |
|---|---|
| Aerospace / Defense | 6 |
| Automotive | 6 |
| Chemicals | 6 |
| Consumer Products | 6 |
| Energy: Electricity Cooperative | 6 |
| Energy: Electricity - Project Finance | 6 |
| Energy: Electricity - Non Project Finance | 8 |
| Energy: Oil & Gas - Drilling | 5 |
| Energy: Oil & Gas - Exploration & Production | 6 |
| Energy: Oil & Gas - Integrated | 6 |
| Energy: Oil & Gas - Merchant Energy | 6 |
| Energy: Oil & Gas - Midstream | 6 |
| Energy: Oil & Gas - Project Finance | 6 |
| Energy: Oil & Gas - Refining & Marketing | 6 |
| Energy: Oil & Gas - Services | 5 |
| Environment | 6 |
| Forest Products | 5 |
| Gaming / Lodging | 8 |
| Healthcare - Hospitals and Services | 6 |
| Healthcare - Medical Devices | 6 |
| Homebuilding | 5 |
| Leisure & Entertainment | 8 |
| Manufacturing | 6 |
| Media: Advertising & Broadcasting | 6 |
| Media: Diversified, Paid TV & Subscription Radio | 6 |
| Media: Printing & Publishing | 6 |
| Metals & Mining | 5 |
| Natural Products Processor | 6 |
| Packaging | 5 |
| Pharmaceuticals | 5 |
| Public Utility | 6 |
| Public Utility - Gas Distribution | 8 |
| Public Utility - Gas Transmission | 8 |
| Restaurants | 8 |
| Retail | 8 |
| Services - Business | 6 |
| Services - Consumer | 6 |
| Services - Contractors | 5 |
| Services - Processors | 5 |
| Services - Rental | 5 |
| Services - Towers & Satellites | 5 |
| Technology | 5 |
| Telecommunications | 5 |
| Transportation Services | 6 |
| Airline | 8 |
| Maritime Shipping | 8 |
| Transportation Services - Airports & Toll Roads | 6 |
| Wholesale Distribution | 6 |

# Appendix A

Table 2 on page 3 of this report has been updated to include multiples of rent expense for the Airline and Maritime Shipping industries.

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Moody's Global
# Corporate Finance

## Special Comment

March 2009

# Managing Ratings with Increased Pension Liability

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- Increased pension fund liability unlikely to be sole driver of ratings downgrades where issuers have adequate liquidity, sufficient resources to alleviate their funding deficiency over time and financial metric contraction is modest for their rating category and only temporarily deviates
- In evaluating the impact of an issuer's pension liability on ratings, Moody's will consider the magnitude of the shortfall, the ability of the company to reduce the shortfall over time using internal sources and committed external sources of capital, and the plans for doing so.
- Moody's does not assume that there will be any reduction in funding needs due to a market recovery and notes that equity markets have fallen further in most global markets since the year-end measurement date that is used for pension liability calculations in most countries.
- Issuers with higher ratings are likely to avoid a downgrade solely resulting from the increased pension liability if there is a clearly articulated plan for reducing the liability and Moody's believes there are resources available to meet the plan without putting the core business and financial profile at risk.
- Issuers with speculative grade ratings and those at the lower end of investment grade rating levels are at greater risk of ratings transition because of higher potential exposure to liquidity issues and weaker perceived capability of eradicating the funding liability without weakening the company's financial or business position.

Moody's Investors Service

Managing Ratings with Increased Pension Liability

## Summary

Several factors converged in 2008 to cause significant deterioration in the funded level of defined benefit pension plans resulting in funded plans moving to an underfunded position and underfunded levels falling further into deficit. The impact on issuers will vary globally based upon regulatory requirements. In countries such as the U.S. and United Kingdom, which have mandatory funding requirements, the impact will be more profound than on issuers in other countries which have different requirements, such as "pay as you go".

The most material factor impacting the change in pension positions was the precipitous drop in the capital markets globally and resultant depression in plan asset values. Further, in the U.S., the measurement date for calculating pension liabilities changed to a fiscal year-end date, for most companies December 31, when asset values had further collapsed relative to prior year's measurement dates. In addition, the Pension Protection Act of 2006 (PPA), which requires defined benefit plans in the U.S. to be fully funded over a seven-year period, became effective in 2008. This will increase the required pension contributions for most companies with under-funded plans. Companies whose plans are funded between 65% and 80% at the end of 2008 could face larger contributions than would have been made under prior legislation. Those plans which are deemed to be "at risk" (less than 65% funded at the end of 2008) will face proportionately larger contributions. Legislative relief passed in December of 2008 could adjust payment schedules and extend the transition period of the new funding requirements in the U.S., however, we view this as merely a deferral of 2009 requirements to 2010. While we recognize that any such relief would provide companies a longer time horizon to formulate their strategy of meeting increased funding requirements, increases in cash contributions over this time frame remain substantial.

Outside the U.S. there is large diversity in regulatory funding requirements ranging from no funding requirements, for countries such as Germany and Austria, to required contributions over set time periods.

Although the deterioration in plan asset values will add pressure to ratings, Moody's does not anticipate a broad wave of rating downgrades solely as a result of pension-related issues. However, pension issues will contribute to downgrades for a significant number of companies whose expected performance will fall now outside the range that was assumed for the ratings, and companies that may face increased liquidity stress. Our analysis will be company specific and will consider the degree and time period over which ratios are likely to depart from expectations for the existing rating and the likelihood that the company is able and willing to take actions to bring its financial metrics back in line with the rating in the near term. Higher rated companies are likely to have more cushion in their ratings and substantially greater flexibility to adjust to increased requirements. For example, some highly rated companies may offset increased pension funding needs by reductions in share repurchase activity, immunizing debt holders from the credit impact of the increased pension shortfall. However, lower rated companies have less flexibility and usually have a more vulnerable liquidity profile, and consequently are at greater risk of rating action. Moody's estimates that the majority of issuers in the U.S. falling below the 80% threshold (about 550 of approximately 740 rated companies) are rated in the Baa to B rating categories.

See Appendix 1 for funding and accounting implications.

## Why Does It Matter

There are a number of key areas where the deterioration in defined benefit pension plans will result in analytical impact.

# Managing Ratings with Increased Pension Liability

## Financial Metrics:

Due to the contractual nature of defined benefit plans, Moody's views pension liabilities as debt-like and make appropriate adjustments to a company's balance sheet, income statement and cash flow statement. [1] Accordingly, we anticipate that as a result of the significant increase in liabilities for underfunded plans, there will be a deterioration in leverage and coverage ratios such as Debt/EBITDA, Debt/RCF and interest coverage (we impute interest charges on the additional debt). For year-end 2008, pension adjustments to financial statements could be especially harsh for non-investment grade issuers. Not only will higher adjusted debt be included in assessing their leverage, but the interest rate used to calculate interest expense on this obligation will be determined at a time when yields on non-investment grade instruments were at or near record levels. Thus interest coverage metrics are likely to be disproportionately affected compared to investment grade issuers.

***Our credit analysis includes a comparison of each issuer's updated and prospective financial measures to the ranges that were the basis for its existing ratings in the context of each issuer's individual characteristics and our rating methodologies. Rating downgrades are likely where financial metrics move too far outside previous expectations or are viewed as unlikely to be restored over the near term to levels that are consistent with the existing rating.***

Moody's analysis will continue to focus on the fundamentals of a company's business footprint and the industry in which in operates including but not limited to:

- Competitive business environment in which the company operates
- Quality and sustainability of earnings and cash flow generation
- Funding requirements over the next several years relative to degree of financial leverage already existing in the capital structure
- Ability to and cost of raising debt to meet cash flow shortfalls

In addition to the purely quantitative aspects, there are also key qualitative aspects that will be considered. These include management's approach to addressing the company's increased funding requirements such as the likelihood of freezing or exiting defined benefit plans, suspending 401K payments to conserve cash and other options that are available to preserve cash within the company. To the extent the company has plans that can be executed and can maintain solid liquidity, there is some rating tolerance for metrics that, in the short term, drift out of the bounds indicated by its rating and the rating methodology for its specific industry.

## Liquidity

In jurisdictions where cash contributions are required to replenish the defined benefit plans, liquidity, which may already be pressured due to adverse trends in the global economy and capital markets, could be further strained. This is particularly true in the United States as a result of the new funding regulations, which became effective in 2008 and require companies to have their qualified defined benefit plans 100% funded over a seven-year phase-in period. Special rules also exist under the new U.S. funding regulations for companies sponsoring plans deemed to be "at risk" (below 65% funded in 2008 trending up to 80% funded in 2011), which could place even greater stress on troubled companies by significantly increasing the amount of required near-term pension contributions. While variability in market values leads us to conclude that pension-adjusted credit measures should be evaluated over a period of time, restoration of plan asset values in the capital markets is not assured and is not assumed in our analysis. Consequently, liquidity impacts over the

[1] For additional information on Moody's standard adjustments, please see "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I: Standardized Adjustments to Enable Global Consistency for US and Canadian GAAP Issuers", February 2006; "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part II: Standardized Adjustments to Enable Global Consistency for Issuers Reporting under International Financial Reporting Standards (IFRS)", February 2006; "Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part III: Standardized Adjustments to Enable Global Consistency for Issuers Reporting under Japanese GAAP", October 2006.

next several years need to be considered for each company in the context of its prospects in the current operating environment.

### Covenant Compliance

On a U.S. GAAP basis, companies that experience large non-cash charges to Other Comprehensive Income (OCI) as a result of the substantial increase in underfunded pensions will experience deterioration in their net worth positions. This will be further exacerbated if, at the same time, companies have also experienced meaningful asset impairment and restructuring charges. This could potentially result in financial covenant issues for firms which have minimum net worth, maximum debt to net worth or maximum debt/capital tests, absent non-cash charges being excluded from applicable definitions. In turn, this could further elevate liquidity concerns brought forward by higher pension contribution requirements. Covenant violations could result in loss of access to committed revolving credit facilities or acceleration of term loans for some companies. Stronger companies are likely to be able to obtain amendments or waivers from their lending group but may need to agree to changes in credit agreement terms and conditions. Such changes include higher pricing, commitment reductions or the granting of security for previously unsecured facilities.

### Competitive Position

Over time, firms which face increased pension contribution requirements may find their competitive profile challenged or their cost of capital increased as more resources are dedicated to narrowing the unfunded status of the plan and less are available for other uses such as capital spending. Such companies may find it more difficult to maintain capital investments at levels that would contribute to increased productivity, improve cost structures, and expand product offerings, or invest in research & development, make strategic acquisitions, and pay dividends. Competitors with lower or no pension funding requirements (e.g. companies with defined contribution plans or no mandated funding levels), would not face similar funding requirements and are likely to have relatively more capital to invest in their business.

## Liquidity Is A Key Analytical Focus

In evaluating the effect on ratings of companies with increased pension obligations, Moody's analysis will encompass a wide range of impact and possible outcomes. These are likely to vary on a company by company basis as well as on a regional basis. However, an important determinant in the rating impact on affected issuers globally will be the magnitude of cash required to meet increased funding obligations relative to the company's liquid resources, (those that can be internally generated and assurance of external funding availability) and other cash requirements, such as its debt maturity profile, capital spending requirements to maintain its competitive position and efficiency of operations, dividend payments and working capital requirements. The timing of inflows versus outflows will also be a consideration. The overall flexibility that a company exhibits in its ability to manage cash requirements, and its willingness to make trade-offs in order to maintain financial integrity and a strong financial profile will be key factors in the rating analysis.

***For more highly rated companies with strong liquidity positions and continued cash generating capacity, which are able and willing to meet increased funding requirements by reducing shareholder returns, this is likely to be a rating neutral event. For lower rated companies and non investment grade companies who have debt maturities over the next twelve to twenty four months and/or are already experiencing stress in business performance and constrained liquidity, ratings are more likely to be impacted.***

## Other Considerations

### Multiemployer Pension Plans

Moody's also considers obligations to multiemployer pension plans, contributions to which companies account for on a pay-as-you go basis, to be "debt-like" in its calculation of leverage metrics. The funded status of multiemployer plans was in a much more precarious position entering the current credit crisis, which could

place even greater funding stress on those companies that participate in such plans. Of particular concern is the joint-and-several nature of these plans and the potential to be the "last entity standing" should weaker participants go bankrupt and drop out of the plan.

## Loss Given Default Methodology

For non investment grade companies, the inclusion of increased pension liabilities in the waterfall could impact specific instrument ratings as the recovery rate on senior secured obligations and their respective expected loss calculations will benefit from increases in the loss absorption cushion provided by higher levels of unsecured claims. As a result, notching of instrument ratings from the Corporate Family Rating could widen for senior secured claims from current rating levels, while, depending upon the composition of a firm's capital structure, ratings on unsecured instruments could migrate further downward on anticipated lower recoveries and higher expected loss given the improved position of secured claims within the liability structure. While Moody's acknowledges the variability in pension positions arising from year-on-year changes in market values, it cannot be assumed that the current situation is easily corrected.

Moody's rating committees use the LGD model as an analytical tool for notching after determining the Corporate Family Rating from fundamental analysis in accordance with Moody's rating methodologies. Rating committees may determine an instrument rating that is different from the rating suggested by the LGD methodology. This is particularly likely for capital structure changes that result in changes in the model indicated rating that analysts believe are likely to be reversed over the near term. In this analysis, rating committees will consider the composition of the liability structure and how a company's plans to make the required and any additional discretionary funding to its pension plan could prospectively change the capital structure over this time horizon.

## Conclusion

Moody's does not anticipate broad scale downward rating adjustments solely as a result of increased pension obligations although these clearly put downward pressure on ratings and will trigger downgrades for companies whose financial performance is no longer expected to be consistent with the existing rating level or which are vulnerable to increased liquidity stress. Increased cash funding requirements, where pre-funding of pension obligations is required, in tandem with debt service and other funding requirements as measured against liquidity available to meet and funding shortfalls will be key considerations in this uncertain environment.

# Appendix 1

## Defined Benefit Pension Obligations – Navigating the funding requirements

The funded status of a pension plan can be measured in several different ways. One measure is contained in the financial statements of companies sponsoring pension plans pursuant to the requirements of Statement of Financial Accounting Standards (SFAS) No. 87, *Employers Accounting for Pensions,* in the United States and International Accounting Standard (IAS) 19, *Employee Benefits*, for many other jurisdictions. Pension plans themselves also prepare separate financial statements. In the United States, the requirements of the Employee Retirement Income Security Act (ERISA) and the PPA apply to the calculation of funded status. The funded status under both methods will most likely yield differing results, either of which could impact ratings.

## Plan Sponsor's Financial Statements

The funded status of a pension plan as defined by SFAS 87 and IAS 19 is derived by comparing the fair value of plan assets (FVA) to the plan's projected benefit obligation (PBO), an actuarially determined liability. Both the FVA and PBO are calculated on the last day of a companies fiscal year end. If the FVA exceeds the PBO, the plan is overfunded. If the PBO exceeds the FVA, the plan is underfunded. This underfunded status is recorded as a liability on the sponsor's balance sheet, which could impact equity based covenants. [2]

Changes in the value of a plan's assets will inevitably impact its funded status. With global markets experiencing multi year lows, Moody's believes many pension plan assets must be experiencing some pain.

The PBO is calculated using many actuarial assumptions, the most significant of which is the plan's discount rate. As a general rule of thumb, pension plan liabilities will change by 8%-12% for every one percent change in a plan sponsor's discount rate. The Moody's Aa index yield was 5.43% as at December 31, 2008 compared to 5.94% as at December 31, 2007 which could indicate lower discount rates thus higher obligations.

## Regulatory funded status in the United States

The regulatory funded status of a plan is calculated in the same manner as for financial reporting purposes, PBO minus FVA, however the manner in which FVA and PBO are calculated are markedly different. This funded status primarily drives the level of contributions required by plan sponsors, which could of course impact liquidity. .

## Plan Assets

The fair value of plan assets for regulatory purposes may be calculated using a 24 month weighted average of market value. However, this weighted average amount can only be between 90% and 110% of the value of assets at year end. This differs from plan assets for accounting purposes that are always determined based on year-end fair values.

## Plan Liabilities

The calculation of a plan's obligation for regulatory purposes is based on a present value using a discount rate derived from a three segment high quality corporate bond yield curve (less than 5 years, 5-20 years, and greater than 20 years) with two-year historical smoothing.

[2] IAS 19 allows companies the option not to record the full pension liability on the balance sheet

Managing Ratings with Increased Pension Liability

## Target Funding

Plans are required to have 100% funding by 2011 phased in over a transition period in 2008.

- 92% for 2008
- 94% for 2009
- 96% for 2010
- 100% for 2011

On December 23, 2008 the Worker, Retiree, and Employer Act of 2008 was passed into law. This new legislation deferred these targets for one year effectively meaning companies need only target 92% funded status for 2009.

If an employer falls short of the above thresholds the shortfall must be added to required contributions over the following seven years.

- Minimum contributions
- If a company's plan is underfunded it must make any or all of the following contributions, as applicable:
- Current year service cost
- Amortization of prior underfundings
- Amortization of any prior funding waivers

There may be circumstances where even though a company is underfunded a required contribution may not be required, namely:

If the plan is 80% funded in current year prior year credit balances (prior year voluntary contributions) may be utilized

These minimum contributions may be increased by a multiple if the plan falls below a "critical status" funding level, 65% for 2009.

## Payment dates

A required contribution must be paid within 8.5 months of the close of the plan year. As plan years begin one day after the fiscal year closes this would mean that a company with a December 31, 2008 year end may have until September 15, 2008 to make its contribution.

However, companies' plans which were underfunded in the prior year compared to the PPA transition thresholds must make quarterly contributions in the current year. For example a company with an underfunded plan as at December 31, 2008 would have to pay its 2009 required contributions on the following dates:

- 1st installment April 15, 2009
- 2nd installment July 15, 2009
- 3rd installment October 15, 2009
- 4th installment January 15, 2010
- Any remaining balance August 15, 2010

## Funding Waiver

Despite all the above rules, and those are just a summary of a selection of rules, companies may apply for a waiver of required contributions if it can prove that doing so would result in "Temporary Substantial Business

Hardship." This waiver is at the discretion of the treasury. Factors taken into consideration in determining a temporary substantial business hardship include, but are not limited to:

- The employer is operating at an economic loss;
- There is substantial unemployment in the trade or business and in the industry concerned;
- The sales and profits of the industry are depressed or declining; and
- It is reasonable to expect that the plan will continue only if the waiver is granted.

As can be seen there is a wide range of possibilities for required contributions to be paid in 2009 and 2010. Some companies may not have to make any contributions in either year while others will be required to make large contributions in both years, however some companies may get these large contributions waived.

## Multiemployer plans

Funding requirements for multiemployer plans are a lot less complicated for multiemployer plans compared to single employer plans. This is because contributions to multiemployer plans are set through negotiations between unions and company sponsors However, to ensure retiree benefits are protected, when a multiemployer plan falls below certain funding levels the PPA kicks in.

Plans which whose funding level are below 80% are referred to as "endangered" while those below 65% are referred to as "critical," or yellow zone, red zone in common parlance. When a plan is endangered the plan administrators must devise a rehabilitation plan to return to an 80% funded status within the next ten years through either increased contributions or decreased benefits or a combination of both. Plans which are "critical" must also devise a 10 year rehabilitation plan but the PPA also mandates an immediate cut in certain vested benefits.

Clearly companies which contribute to endangered or critical plans have the specter of increased contributions and/or contentious labor relations hanging over them.

# Related Research

### Special Comment:

- Pension Deficits: Back on the Agenda, January 2009 (114087)

### Rating Methodology:

- Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I, February 2006 (96760)
- Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part II, February 2006 (96729)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

# Managing Ratings with Increased Pension Liability

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# FASB Proposes to Recognize the Funded Status of Pension and Other Postretirement Benefit Plans on the Balance Sheet

## *Financial Statements Will Be Impacted but Rating Impact is Unlikely*

## Summary


The Financial Accounting Standards Board (the Board) recently proposed to require companies to record the funded status of its retirement plans on the balance sheet (the ED)[1]. In effect, the Board proposes to eliminate the artificial smoothing that current rules permit in the measurement of assets and liabilities, resulting in a balance sheet that better reflects the economics of retirement plans. The ED generally does not impact the income or cash flow statements. The Board hopes to finalize its proposal in time to affect year-end 2006 financial reporting. We support the Board's ED. Removing artificial smoothing from accounting is always a good idea as such smoothing produces meaningless amounts.

The adoption of this standard would significantly increase total liabilities and reduce shareholders' equity for many non-financial corporations, in particular, those with large legacy workforces. The impact could cause some companies to appear insolvent from a financial reporting perspective (see Appendix I).

The change in accounting could impact covenant compliance in some cases. Covenants that use book equity reside in agreements that backstop liquidity as well as in bond indentures. We expect that most companies that violate covenants will be able to negotiate amendments to agreements, although the cost and feasibility of doing so will depend on the company's particular circumstances.

The accounting change could also affect the metrics that regulators use to regulate companies in the banking and other industries, although we doubt the change would significantly impact capital adequacy ratios used by banking regulators.

Overall, despite the significant impact to financial statements, the Board's proposed changes are unlikely to affect our ratings of companies' debt. This is in part because we have historically adjusted companies' financial statements to reflect pension liabilities in a manner similar to the Board's proposal. However, in extreme cases, it is possible that the Board's proposal could negatively affect ratings. These cases could involve particularly large reductions to reported equity due to retiree health care obligations, in industries where reported equity is important to the rating. They could also involve cases in which creditors may refuse to waive covenant violations.


1. *See Proposed Statement of Financial Accounting Standards, Employer's Accounting for Defined Benefit Pension and Other Postretirement Plans—an Amendment of FASB Statements No. 87, 88, 106, and 132(R), March 31, 2006 (we refer to this document as the "proposal" or the "ED")*

## Background

Current accounting standards fail to recognize on a company's balance sheet its economic obligation for its defined benefit pension and other postretirement benefit (OPEB) plans[2] because of artificial smoothing mechanisms permitted under the rules. The smoothing mechanisms defer losses and gains, which can result in anomalous reporting such as recording pension-related assets on the balance sheet when the pension plan is under-funded. The funded status of a company's retirement plans — the difference between the fair value of plan assets and the projected benefit obligation (PBO) for pensions or accumulated postretirement benefit obligation (APBO) for OPEB plans — is currently only disclosed in footnotes to the financial statements.

The Board undertook a comprehensive project last November to reconsider the accounting rules for pensions and other postretirement benefits. It is executing the project in two phases. The first phase tackles the problem of artificial smoothing on the balance sheet (which the ED addresses). The second phase will comprehensively reconsider all other aspects of pension and OPEB accounting, in a long-term project that could ultimately affect accounting in future years.

The ED proposes to fully reflect the funded status of pension and OPEB plans on the balance sheet. Thus, the balance sheet would show an asset for plans that are over-funded and a liability for plans that are under-funded. Companies would recognize previously unrecognized gains and losses, prior service cost and transition obligations that distort the balance sheet. Companies would record the corresponding reduction or increase to equity net of income taxes, requiring the recognition of related deferred tax assets or liabilities. The ED would not impact the income statement, with two minor exceptions[3].

The ED proposes that public companies adopt the standard for years ended after December 15, 2006 (i.e., this year for companies that have a calendar year end). Upon adoption, prior period results will need to be recast. Although the Board frequently misses its self-imposed deadlines, it has placed a high priority on issuing a final statement in time to affect 2006 reporting. It is always possible, however, that the comment process and politics could slow the Board's timetable.

## Impact of Proposed Accounting Changes on Financial Statements

The ED's adoption would significantly increase total liabilities and reduce shareholders' equity for some companies. Appendix I lists 50 large companies from the Moody's rated population that we estimate the proposal would significantly affect, at least as measured by the change in equity. Not surprisingly, companies with large legacy obligations such as GM and Ford are most impacted by the pronouncement. Conversely, no financial institutions made the list as they often do not sponsor rich plans or have funded them well.

For pensions, the ED would likely require significant changes, as many companies have recorded large pension-related assets, while the underlying plan is under-funded. The anomaly between the recognized assets and under-funding exists because of deferral of massive actuarial losses related to under-performing pension assets and higher than expected liabilities because of low discount rates in recent years. For example, 26 of the 50 companies in Appendix I have recorded net pension assets while their pension plans are under-funded. For all companies in Appendix I, we estimate that the ED would result in a 14% median reduction in equity related to pensions as of December 31, 2005.

For OPEB plans, the ED would also require significant changes. Many companies have unrecognized actuarial losses related to OPEB liabilities because of lower discount rates and higher than expected health care costs. The ED would require companies to recognize those losses as increases in OPEB liabilities and decreases to equity (net of income taxes). Further, unlike pensions, companies are not required under current GAAP to record a minimum liability when an OPEB plan is severely under funded. So, some companies have a larger adjustment to record to reflect the funded status of the OPEB plan than they would have, had standards required a minimum liability.

For OPEB plans, the ED's biggest impact is concentrated in the automotive and telecommunications companies. These companies sponsor large union plans and have been less successful historically in transferring OPEB costs to employees compared to companies in other circumstances. For the automotive and telecommunication companies in Appendix I, the ED would reduce reported median equity in excess of 40 percent, on average, related to OPEB plans. In contrast, for other companies in Appendix I, the impact is around 3 percent.

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*2. The most common OPEB plan promises to provide in-kind health benefits to retirees.*

*3. The ED would require that all companies use a fiscal year-end measurement date in measuring plan assets and liabilities, a change for many companies that now use interim measurement dates. It would also eliminate amortization of unrecognized transition obligations, if any. The impact of these changes on income is likely immaterial.*

## Rating Impact is Unlikely, but Possible

Although the ED would significantly change financial statements, the changes would unlikely impact our ratings, for the reasons we describe below. However, the change in accounting could impact ratings in extreme cases.

### *Moody's currently adjusts financial statements to recognize under- funded pension obligations*

Moody's has historically adjusted a sponsor's balance sheet to reflect a liability equal to the under-funded status of the pension plan, similar to the FASB's proposed approach[4]. Further, because of the contractual nature of pension obligations, we view the pension liability as "debt - like". Thus, we classify it as debt on the balance sheet and include it in the computation of ratios that use debt.[5]

To illustrate, the following table contrasts current accounting, the ED, and Moody's adjustments for pensions, using one of the companies from Appendix I.

| Metric | Current Accounting | FASB Proposal | Reflecting Moody's Pension Adjustment |
|---|---|---|---|
| 3M Company (fiscal 2005) | | | |
| Cash from Operations/Debt | 179% | 179% | 125% |
| Free Cash Flow/Debt | 83% | 83% | 64% |
| EBIT/Interest Expense | 62x | 62x | 35x |
| Debt/EBITDA | 0.4x | 0.4x | 0.6x |
| Debt/Book Capitalization | 17% | 22% | 30% |

The example illustrates that:

- On the balance sheet, the Board's proposal moves towards Moody's analytical adjustment for companies with under funded pensions, although the proposal does not classify the pension obligation as debt.
- On the income statement, the ED leaves the income statement largely alone, deferring changes to Phase II of its comprehensive reconsideration of pensions, whereas Moody's adjusts the income statement to remove the effects of artificial smoothing.
- The ED will probably not change Moody's impression of a company's credit risk since Moody's pension adjustment already incorporates the ED's proposed changes, while going beyond it in certain respects (however, see discussion about covenant implications below).

### *For OPEB plans, the ED's changes will affect our metrics and, in extreme cases, could affect a rating*

In contrast to pensions, Moody's has rarely adjusted companies' financial statements for OPEB plans[6]. Thus, the ED's OPEB-related changes will impact the financial statements we use in the rating process, whereas pension-related changes will not.

We rarely adjust financial statements for OPEB plans because we view the OPEB liability as not debt-like[7]. Because many of the most leading metrics of credit risk involve debt or interest, adjusting long-term non-debt liabilities would typically not alter our view about credit risk. For example, note that the ED's adjustment for OPEB would not have affected the first four ratios in the above example.

Since issuing our rating methodology for OPEB plans in 2004, we have published many industry rating methodologies, which explain both the quantitative and qualitative factors that we consider most relevant in rating companies in each industry. To date, nearly half of those methodologies have listed as an important credit metric a ratio that includes reported equity. The ED's changes related to OPEB will affect those metrics for many companies.

Although the ED would affect certain metrics, it is unlikely the change will impact our ratings in the vast majority of cases. In most cases, the impact of OPEB change on a key metric will not be so significant as to make the company an outlier relative to its current rating. Further, there are features of OPEB obligations that mitigate their impact on credit risk. For example, companies have the right to eliminate the OPEB liability and many have demonstrated over

4. *See Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I, February 2006. For financial institutions, we usually don't adjust financial statements for pensions because the impact of doing so is not significant to our rating. However, we do adjust the statements of some institutions, such as certain insurance companies, for which we believe the impact could be relevant.*
5. *We also adjust the income statement, to reflect the pension expense absent the effects of artificial smoothing, such as the amortization of prior service cost and actuarial gains and losses. On the cash flow statement, we view cash contributions in excess of service cost as the repayment of (pension) debt.*
6. *See Moody's publication, Other Postretirement Benefits – Moody's Analytical Approach, December 2004.*
7. *In the case of companies with collective bargaining agreements and those with a higher ratio of retirees to active employees, Moody's analysts supplement their understanding through discussion with company management and may conclude that all or a portion of unfunded OPEB obligations are debt-like.*

a long period their ability to shift OPEB costs to employees, particularly when the company is under financial stress. Also, the pattern of future cash outflows to pay OPEB liabilities are typically long-tailed and smooth, without sudden bullet payments or acceleration features common in many debt instruments. Finally, the funded status to the OPEB plans is not new news and has been clearly disclosed in footnotes to financial statements since 1993. Our current method for considering a large unfunded OPEB plan is to evaluate the cash flows required to pay benefit payments and to factor those cash flows into our projections of the company's financial position and performance. The ED's change for OPEB will probably not change those projections.

However, there could be a scenario under which the OPEB adjustment could matter to our rating. That scenario would probably involve (1) a reduction of reported equity sufficient to cause the company to be an outlier relative to its current rating and peers, (2) an industry for which reported equity is particularly important to the rating and (3) a worsening of the OPEB liability over time in terms of the amount and timing of future cash flows and relative inflexibility to shift the OPEB burden to employees. It could also involve covenant violations, as we discuss next.

### *Covenant and Regulatory Implications*

The proposed accounting change could cause some companies to either breach or significantly reduce the headroom under a covenant (such as a net worth covenant). Covenants that use book equity reside in agreements that backstop liquidity as well as in bond indentures. We expect that most companies that violate covenants will be able to negotiate amendments to agreements, although the cost and feasibility of doing so will depend on the company's particular circumstances. However, in extreme cases, lenders could refuse to waive covenant violations, which in turn could undermine liquidity or increase financial stress that could impact Moody's assessment of the company's credit risk and rating.

The ED's changes to financial statements could also affect the metrics that regulators use to regulate companies in the banking and other industries. For banks, the proposed pension and OPEB adjustments appear to only modestly affect reported shareholders' equity. Thus, any impact on regulatory capital adequacy ratios is also likely to be modest. Banking regulators have not yet said how they will treat the Board's adjustments; they have at times allowed a transition period to ease the impact of accounting changes. For Insurance companies, regulators prescribe statutory accounting rules that define regulatory capital. It is unclear how they will view the Board's proposal for regulatory purposes. However, we doubt that the ED's adjustment to equity is significant for most insurance companies.

## Related Research

**Rating Methodology:**

Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations - Part I, February 2006 (96760)

Analytical Observations Related To U.S. Pension Obligations, January 2003 (77242)

Other Postretirement Benefits -Moody's Analytical Approach, December 2004 (90378)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

# Appendix 1: 50 Large Companies That Are Likely to Have a Significant Impact on Shareholders Equity Due to the Proposed Change in Pension and OPEB Accounting (in $ '000s)

| | | Funded Status of Retirement Plans | | | Impact of ED on Equity | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company Name | Revenue | Pension Funded Status Over (Under)[1] | OPEB Funded Status Over (Under) | | As Reported Equity | After Tax Adjustment for Pensions[2] | After Tax Adjustment for OPEB[3] | Pro-Forma Equity | Overall Percentage Incr (Decr) to Equity |
| Goodyear Tire & Rubber Co. | 19,723,000 | (3,011,000) | (2,629,000) | | 73,000 | (709,150) | (464,100) | (1,100,250) | -1607% |
| Lucent Technologies | 9,441,000 | 2,693,000 | (5,106,000) | | 375,000 | (1,222,000) | (167,700) | (1,014,700) | -371% |
| General Motors Corporation | 192,604,000 | (4,599,000) | (64,659,000) | | 14,597,000 | (20,549,100) | (19,930,300) | (25,882,400) | -277% |
| Ford Motor Company | 177,089,000 | (10,811,000) | (32,777,000) | | 12,957,000 | (6,585,800) | (8,420,750) | (2,049,550) | -116% |
| UST Inc. | 1,851,885 | (164,668) | (84,984) | | 75,098 | (65,199) | 543 | 10,442 | -86% |
| Boeing Company (The) | 54,845,000 | (1,699,000) | (7,976,000) | | 11,059,000 | (7,422,350) | (1,246,050) | 2,390,600 | -78% |
| Lockheed Martin Corporation | 37,213,000 | (4,989,000) | (1,995,000) | | 7,867,000 | (3,073,200) | (466,700) | 4,327,100 | -45% |
| Deere & Company | 21,930,500 | (198,000) | (4,051,000) | | 6,851,500 | (1,429,350) | (1,037,400) | 4,384,750 | -36% |
| Caterpillar Inc. | 36,339,000 | (1,575,000) | (4,507,000) | | 8,432,000 | (1,819,350) | (1,199,250) | 5,413,400 | -36% |
| International Business Machines Co. | 91,134,000 | (3,037,000) | (5,826,000) | | 33,098,000 | (10,980,450) | (475,150) | 21,642,400 | -35% |
| Pitney Bowes Inc. | 5,492,183 | (169,236) | (272,682) | | 1,301,941 | (424,824) | (20,617) | 856,501 | -34% |
| Kellogg Company | 10,177,200 | (222,500) | (542,200) | | 2,283,700 | (479,050) | (272,805) | 1,531,845 | -33% |
| Colgate-Palmolive Company | 11,396,900 | (528,600) | (400,800) | | 1,350,100 | (307,515) | (130,195) | 912,390 | -32% |
| E.I. du Pont de Nemours and Co. | 28,491,000 | (3,143,000) | (4,089,000) | | 8,907,000 | (3,016,650) | 371,800 | 6,262,150 | -30% |
| The Hershey Company | 4,835,974 | 157,013 | (355,878) | | 1,021,076 | (227,665) | (53,333) | 740,078 | -28% |
| NCR Corporation | 6,028,000 | (458,000) | (180,000) | | 2,035,000 | (572,650) | 27,300 | 1,489,650 | -27% |
| Verizon Communications | 75,112,000 | 3,429,000 | (23,533,000) | | 39,680,000 | (2,891,200) | (7,742,150) | 29,046,650 | -27% |
| 3M Company | 21,167,000 | (1,311,000) | (679,000) | | 10,100,000 | (2,202,850) | (503,100) | 7,394,050 | -27% |
| ITT Industries, Inc. | 7,427,300 | (623,300) | (513,300) | | 2,723,400 | (584,675) | (135,070) | 2,003,655 | -26% |
| Campbell Soup Company | 7,548,000 | (289,000) | (397,000) | | 1,270,000 | (238,550) | (59,800) | 971,650 | -23% |
| Textron Inc. | 10,043,000 | (373,000) | (744,000) | | 3,276,000 | (619,450) | (148,850) | 2,507,700 | -23% |
| H.J. Heinz Company | 8,912,297 | (129,558) | (290,787) | | 2,602,573 | (491,150) | (49,364) | 2,062,060 | -21% |
| American Standard Co. Inc. | 10,264,000 | (605,100) | (319,500) | | 922,500 | (117,000) | (65,715) | 739,785 | -20% |
| Honeywell International Inc. | 27,653,000 | (1,515,000) | (2,318,000) | | 11,254,000 | (1,966,250) | (245,050) | 9,042,700 | -20% |
| AT&T Corp. | 43,862,000 | 2,579,000 | (23,808,000) | | 54,690,000 | (5,571,150) | (4,777,500) | 44,341,350 | -19% |
| Rockwell Automation, Inc. | 5,003,200 | (840,700) | (426,100) | | 1,649,100 | (170,430) | (138,905) | 1,339,765 | -19% |
| United States Steel Corporation | 14,039,000 | (606,000) | (2,274,000) | | 3,324,000 | (391,300) | (220,350) | 2,712,350 | -18% |
| Dow Jones & Co. | 1,769,690 | (50,431) | (261,230) | | 162,265 | (9,364) | (20,171) | 132,730 | -18% |
| United Technologies Corporation | 42,725,000 | (2,806,000) | (1,021,000) | | 16,991,000 | (3,086,200) | 27,950 | 13,932,750 | -18% |
| Eli Lilly and Company | 14,645,300 | (146,000) | (707,900) | | 10,791,900 | (1,298,765) | (642,070) | 8,851,065 | -18% |
| Xerox Corporation | 15,701,000 | (1,858,000) | (1,653,000) | | 7,208,000 | (1,052,350) | (237,250) | 5,918,400 | -18% |
| FedEx Corporation | 29,363,000 | (1,575,000) | (537,000) | | 9,588,000 | (1,656,200) | (1,950) | 7,929,850 | -17% |
| PPG Industries | 10,201,000 | (824,000) | (1,119,000) | | 3,053,000 | (217,750) | (291,850) | 2,543,400 | -17% |

## Appendix 1: 50 Large Companies That Are Likely to Have a Significant Impact on Shareholders Equity Due to the Proposed Change in Pension and OPEB Accounting (in $ '000s)

| | | Funded Status of Retirement Plans | | | Impact of ED on Equity | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company Name | Revenue | Pension Funded Status Over (Under)[1] | OPEB Funded Status Over (Under) | | As Reported Equity | After Tax Adjustment for Pensions[2] | After Tax Adjustment for OPEB[3] | Pro-Forma Equity | Overall Percentage Incr (Decr) to Equity |
| General Mills | 11,244,000 | 155,000 | (729,000) | | 5,676,000 | (619,450) | (248,300) | 4,808,250 | -15% |
| Raytheon Company | 21,894,000 | (3,902,000) | (765,000) | | 10,709,000 | (1,439,100) | (124,800) | 9,145,100 | -15% |
| Bellsouth Corporation | 20,547,000 | 4,415,000 | (6,347,000) | | 23,534,000 | (62,400) | (3,350,100) | 20,121,500 | -15% |
| Goodrich Corporation | 5,396,500 | (708,900) | (404,100) | | 1,473,000 | (167,635) | (43,745) | 1,261,620 | -14% |
| PepsiCo Inc. | 32,562,000 | (849,000) | (1,312,000) | | 14,320,000 | (1,797,250) | (200,200) | 12,322,550 | -14% |
| Northrop Grumman Corp. | 30,721,000 | (1,825,000) | (2,561,000) | | 16,828,000 | (1,942,850) | (403,650) | 14,481,500 | -14% |
| Whirlpool Corporation | 14,317,000 | (576,000) | (701,000) | | 1,745,000 | (112,450) | (123,500) | 1,509,050 | -14% |
| United Parcel Service, Inc. | 42,581,000 | 434,000 | (2,418,000) | | 16,884,000 | (1,794,650) | (464,100) | 14,625,250 | -13% |
| Wyeth | 18,755,790 | (930,519) | (1,951,144) | | 11,994,369 | (1,098,798) | (483,874) | 10,411,697 | -13% |
| Baxter International Inc. | 9,849,000 | (1,100,000) | (506,000) | | 4,299,000 | (445,250) | (85,150) | 3,768,600 | -12% |
| Ecolab Inc. | 4,534,832 | (241,742) | (140,134) | | 1,649,210 | (178,677) | (21,163) | 1,449,370 | -12% |
| Allegheny Technologies Inc | 3,539,900 | (278,500) | (474,100) | | 799,900 | (88,010) | (8,190) | 703,700 | -12% |
| Fluor Corp. | 13,161,051 | (45,885) | (30,094) | | 1,630,558 | (184,846) | (7,103) | 1,438,609 | -12% |
| Bristol-Myers Squibb Company | 19,207,000 | (901,000) | (390,000) | | 11,208,000 | (1,172,600) | (52,650) | 9,982,750 | -11% |
| Dow Chemical Company | 46,307,000 | (2,293,000) | (1,791,000) | | 15,324,000 | (1,393,600) | (139,750) | 13,790,650 | -10% |
| Merck & Co. | 22,011,900 | (452,900) | (539,200) | | 17,916,600 | (1,529,450) | (223,470) | 16,163,680 | -10% |
| Corning Inc. | 4,579,000 | (306,000) | (874,000) | | 5,609,000 | (393,900) | (140,400) | 5,074,700 | -10% |

*Source: Form 10K*
*Notes:*
*Data is on as reported basis as of fiscal 2005. We excluded the utility companies from our study as many of these companies have the ability to recover pension costs from customers and would therefore record a regulatory asset rather than a reduction to equity. Moody's recognizes that Aerospace and defense government contractors can recover a high percentage of their cash outlays, including voluntary contributions, related to underfunded defense-related pension plans. Please refer to Moody's Special Comment "Credit Considerations Related to Defense Contractors' Pension Obligations".*
*1. Pension funded status presented on a net basis. Separate disclosure of pension funded status for over and under funded plans, as required by the ED, is generally not currently disclosed.*
*2. After tax adjustment for pensions computed as the difference between net pension assets or liabilities recognized on the balance sheet (equal to the prepaid pension cost + intangible asset – accrued pension liability – additional minimum liability) and the funded status (PBO less plan assets) of the plan(s) multiplied by 65% (1- tax rate%)*
*3. After tax adjustment for OPEB computed as the difference between net OPEB liabilities or assets (accrued benefit liability less prepaid cost) recognized on the balance sheet and the funded status of the plan(s) multiplied by 65% (1- tax rate%)*

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# Fitch Ratings Global Corporate Finance 2008 Transition and Default Study

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**Index of Key Exhibits**



## Summary

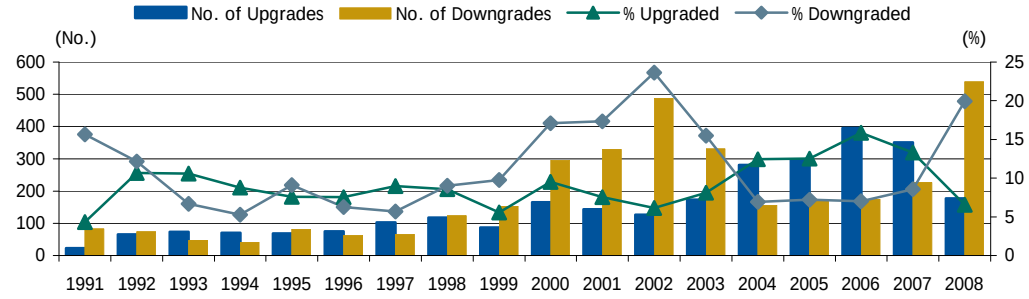
This study provides data and analysis on the performance of Fitch's global corporate ratings in 2008 and over the long term, capturing the period 1990–2008. The report provides summary statistics on the year's key rating transition and default trends.

Global corporate credit quality deteriorated at an alarming pace in 2008 with downgrades affecting 20% of Fitch-rated corporate finance issuers, up from 8.6% in 2007. The year's events were unprecedented, beginning with the devastating impact of the U.S. housing market downturn on large financial institutions with exposure to mortgage-backed or related securities and ending with debilitated credit markets, plunging consumer and business confidence, and confirmed economic recessions in the U.S. and throughout most of Europe, with emerging market economies also weakening late in the year.

The credit and, ultimately, economic crisis, affected issuers up and down the rating scale. Investment-grade issuers saw downgrades climb year-over-year to 19.2% from 8.7% in 2007 and upgrades fall to 4.7% from 10.5% in 2007. Speculative-grade issuers experienced a similar pattern with downgrades increasing to 21.9% from 8.2% in 2007 and upgrades tumbling to 11.9% from 21.6% a year earlier. Global corporate downgrades exceeded upgrades by a margin of 3-to-1 in 2008, a strong departure from the 0.6-to-1 ratio recorded in 2007 and the first time downgrades topped upgrades since 2003. In addition, Fitch recorded 37 global issuer defaults, up from just three in 2007 for a full-year global corporate default rate of 1.29% compared with 0.11% in 2007.

Given the reach and depth of the still unfolding economic downturn and, in particular, an unparalleled period of stress for large and critically important global financial institutions, Fitch believes corporate rating trends will continue to be bleak in 2009, with continued negative rating drift and rising corporate default rates. Importantly, at the end of 2008, 26% of Fitch-rated global corporate issuers carried a negative outlook or watch assignment compared with just 5% on positive outlook or watch.

**Fitch Global Corporate Finance Historic Rating Changes[a]**




[a]Compares beginning of year rating with end of year rating; does not count multiple rating actions throughout the year. Note: Rating changes defined at modifier level, making a distinction between +/–.
Source: Fitch.

## Fitch Global Corporate Finance Rating Movements Across Major Rating Categories

(%)

| | 1990–2007 | | 2007 | | 2008 | |
|---|---|---|---|---|---|---|
| | Downgrade | Upgrade | Downgrade | Upgrade | Downgrade | Upgrade |
| AAA | 4.82 | NA | 8.70 | NA | 13.64 | NA |
| AA | 7.40 | 0.09 | 5.84 | 0.00 | 21.77 | 0.00 |
| A | 4.91 | 2.41 | 3.25 | 2.04 | 7.95 | 1.81 |
| BBB | 4.58 | 4.77 | 2.93 | 4.03 | 6.38 | 2.55 |
| BB | 10.02 | 9.03 | 6.89 | 11.29 | 15.10 | 6.84 |
| B | 5.45 | 12.79 | 2.14 | 10.32 | 10.80 | 5.56 |
| CCC to C | 24.50 | 21.61 | 6.90 | 27.59 | 26.09 | 8.70 |

NA – Not applicable. Note: Data enhancement efforts may lead to slightly different results than previously published. Current study supersedes all prior statistics.
Source: Fitch.

## Highlights

- Global corporate rating actions turned increasingly negative as 2008 unfolded and in record time exhibited deep recessionary patterns. The ratio of downgrades to upgrades, already in negative territory early in the year, moved from 2-to-1 in the first quarter to 12.5-to-1 in the last quarter. For the full year, downgrades affected 20% of Fitch-rated corporate finance issuers, similar to the 2002 corporate downgrade rate of 23.6%, but again the speed of credit deterioration was far more pronounced than any previously recorded by Fitch. Downgrades totaled 539 in 2008 and upgrades totaled 177. Downgrades were up more than twofold year over year while upgrades fell 49.6%.
- Credit and economic troubles in 2008 resulted in frequent multi-notch downgrades. Multi-notch downgrades outpaced upgrades by 6.8-to-1 compared with a modest 1.3-to-1 in 2007, and slightly below a peak of 7.1-to-1 recorded by Fitch in 2002.
- Not surprisingly, the mix of fallen angels and rising stars reversed direction in 2008. The margin of fallen angels to rising stars settled at 1.9-to-1, closer in line with recessionary results from the 2001–2002 period. Year-over-year rising stars fell 40% and fallen angels soared 86%, as credit quality fell quickly and sharply. Despite the deterioration among financial issuers, non-financial issuers accounted for the majority, or 67%, of fallen angels during the period, a reflection of the relative efficiency of government intervention in the financial sector.

## Fitch Global Corporate Finance Rating Actions by Sector — 2008[a]

| | Downgrades | | Upgrades | |
|---|---|---|---|---|
| Sector | No. | % of Sector Ratings (%) | No. | % of Sector Ratings (%) |
| Banking and Finance | 263 | 21.8 | 69 | 5.7 |
| Industrials | 206 | 21.1 | 79 | 8.1 |
| Power and Gas | 28 | 8.4 | 22 | 6.6 |
| Insurance | 42 | 21.9 | 7 | 3.6 |
| **All** | **539** | **19.9** | **177** | **6.5** |

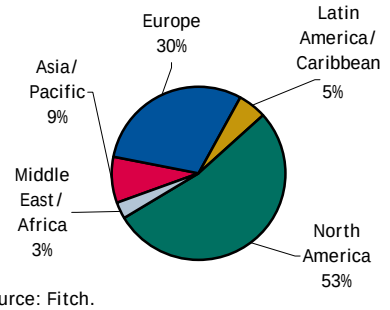
[a]Compares beginning of year rating to end of year rating, does not count multiple rating actions throughout the year. Note: Rating changes defined at the modifier level, making a distinction between +/-.
Source: Fitch.

## Fitch Global Corporate Finance Rating Actions by Region — 2008[a]

| | Downgrades | | Upgrades | |
|---|---|---|---|---|
| Region | No. | % of Regional Ratings (%) | No. | % of Regional Ratings (%) |
| Asia/Pacific | 46 | 10.7 | 39 | 9.1 |
| Europe | 162 | 23.1 | 37 | 5.3 |
| Latin America and Caribbean | 30 | 16.6 | 17 | 9.4 |
| North America | 285 | 22.4 | 66 | 5.2 |
| Middle East and Africa | 16 | 13.2 | 18 | 14.9 |
| **All** | **539** | **19.9** | **177** | **6.5** |

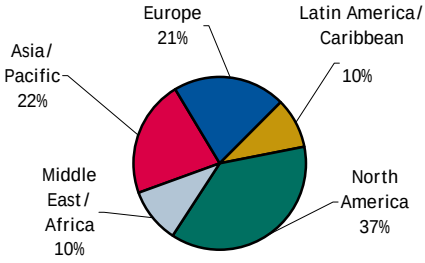
[a]Compares beginning of year rating to end of year rating, does not count multiple rating actions throughout the year. Note: Rating changes defined at the modifier level, making a distinction between +/-.
Source: Fitch.

**Fitch Global Corporate Finance Distribution of Downgrades by Region — 2008**




Source: Fitch.

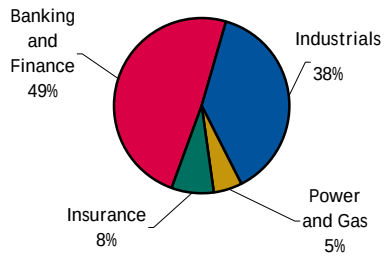
**Fitch Global Corporate Finance Distribution of Upgrades by Region — 2008**




Source: Fitch.

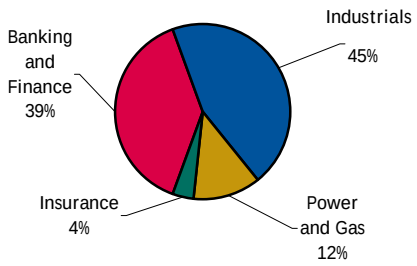
- Regionally, the majority of negative rating activity resided among North American credits, which accounted for 285, or 53%, of corporate finance downgrades in 2008. In fact, 22.4% of all North American corporate issuers received a downgrade in 2008, while only 5.2% received upgrades. However, a nearly comparable share (23%) of European issuers suffered downgrades in 2008 compared with 5% that were upgraded. The mix of downgrades to upgrades was more balanced across Asia/Pacific and Latin America/Caribbean and had a less negative skew across Middle East/Africa. Emerging markets began to feel the pain of the global economic crisis late in the third quarter.
- By sector, banking and finance represented the bulk of 2008 downgrades accounting for 49%, with most downgrades associated with investment losses tied to the severe U.S. housing downturn. However, downgrades affected more than 20% of both outstanding industrial and financial institution ratings in 2008. The share of Fitch-rated power and gas issuers downgraded in 2008 was more moderate at 8.4%. Turning to upgrades, the share of industrial issuers upgraded — 8.1% — was the highest among the four broad market sectors, with power and gas not far off at 6.6%, while banking and finance and insurance upgrade rates were the lowest at 5.7% and 3.6%, respectively.
- Emerging market credit quality came under pressure at the end of 2008. Downgrades outpaced upgrades, although just slightly by 1.1-to-1 in 2008 compared with positive

**Fitch Global Corporate Finance Distribution of Downgrades by Sector — 2008**



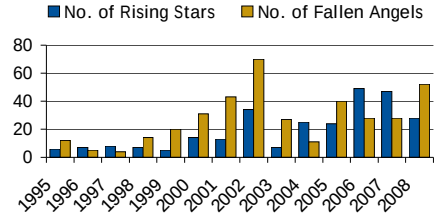

Source: Fitch.

**Fitch Global Corporate Finance Distribution of Upgrades by Sector — 2008**



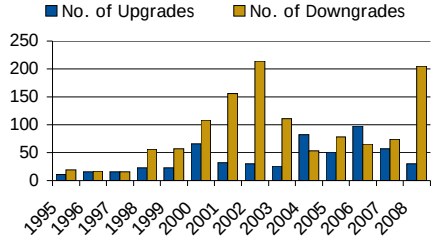

Source: Fitch.

**Fitch Global Corporate Finance Fallen Angels and Rising Stars[a]**




[a]A Fallen Angel is an issuer downgraded from an investment grade to a speculative grade rating. A Rising Star is an issuer upgraded from a speculative grade to an investment grade rating.
Source: Fitch.

**Fitch Global Corporate Finance Multi-Notch Ratings Actions[a]**




[a]A multi-notch rating action is defined here as an upgrade or a downgrade of more than one notch examining rating changes on a year-over-year basis.
Source: Fitch.

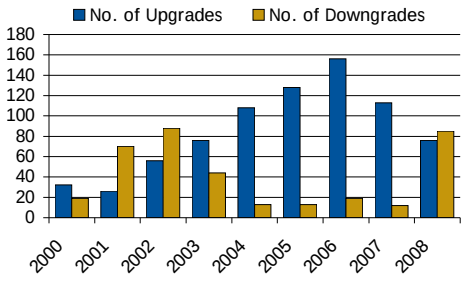
results in 2007, when downgrades trailed upgrades 0.1-to-1. By contrast, developed market issuers registered nearly five downgrades for every one upgrade, showing the disparity between the two market segments in 2008.

- Fitch recorded 37 global corporate defaults in 2008, up sharply from a benign three defaults registered in 2007. The default rate for Fitch-rated global corporate issuers was 1.29% in 2008, up from 0.11% recorded in 2007 and an average annual default rate of 0.68% over the 1990–2008 period. The annual default rate across Fitch's investment-grade corporate ratings was 0.57% in 2008 and 3.27% across Fitch-rated speculative-grade issuers. The average annual default rate for investment-grade issuers was 0.14% and 2.99% for speculative-grade for the 1990–2008 period.

## Fitch 2008 Rating Migration Rates

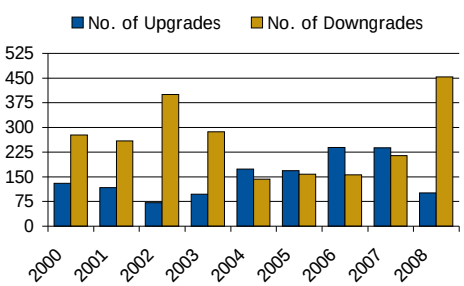
An examination of the 2008 one-year rating migration data at the major rating categories pinpoints the movement of ratings both up and down the rating scale from 'A' to 'BBB' for example, as opposed to the modifier level, which counts each notch change or that from 'A' to 'A–'. (Please see the Fitch Global Corporate Finance Transition Rates Across the Major Rating Categories and those at the modifier level in the Appendix). Across the major rating categories, the vertical left-hand column identifies ratings outstanding at the beginning of 2008, while the horizontal axis offers

**Fitch Global Corporate Finance Emerging Markets Historic Rating Activity[a]**




[a]Compares beginning of year rating with end of year rating; does not count multiple rating actions throughout the year.
Source: Fitch.

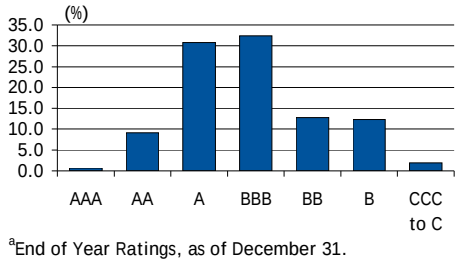
**Fitch Global Corporate Finance Developed Markets Historic Rating Activity[a]**




[a]Compares beginning of year rating with end of year rating; does not count multiple rating actions throughout the year.
Source: Fitch.

information on the migration pattern of those ratings by year's end. The table reads from the top left-hand corner, beginning with 'AAA' at 86.36% and following the diagonal to the right in order to examine the stability of each consecutive rating category. Fitch's 2008 rating migration data revealed continued overall stability, however, with more negative, rather than positive rating volatility. This is in stark contrast to results from recent years and reflective of the current credit environment.

**Fitch Global Corporate Finance Ratings Distribution by Major Rating Category[a] — 2008**




[a]End of Year Ratings, as of December 31.
Source: Fitch.

Across the board, each rating category recorded increases in downgrade rates year-over-year. Similarly, upgrade rates dropped across all the major rating categories, excluding 'AA', which remained at zero.

Investment-grade level downgrades at the major rating categories commenced at the top of the rating scale, which is not surprising given the number of highly rated financial institutions affected by the housing crisis over the course of 2008. Among the limited number of issuers rated 'AAA', the downgrade rate increased to 13.6% from 8.7% in 2007. (It is important to note that over the course of 2008, Fitch also withdrew insurer financial strength ratings (IFS) of five financial guarantors rated 'AAA' at the beginning of 2008. Of these, two were withdrawn at 'AA' and three at 'CCC'. These rating actions are not captured in the table below.)

**Fitch Global Corporate Finance Transition Rates Across the Major Rating Categories: 2008**

(%, One Year)

| | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|---|---|---|---|---|---|---|---|---|---|
| AAA | 86.36 | 13.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 78.23 | 20.41 | 0.68 | 0.00 | 0.00 | 0.00 | 0.68 | 100.00 |
| A | 0.00 | 1.81 | 90.24 | 7.11 | 0.12 | 0.00 | 0.00 | 0.72 | 100.00 |
| BBB | 0.00 | 0.00 | 2.55 | 91.07 | 4.99 | 0.58 | 0.35 | 0.46 | 100.00 |
| BB | 0.00 | 0.00 | 0.28 | 6.55 | 78.06 | 10.54 | 1.99 | 2.56 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 1.23 | 4.32 | 83.64 | 7.72 | 3.09 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.70 | 65.22 | 26.09 | 100.00 |

Source: Fitch.

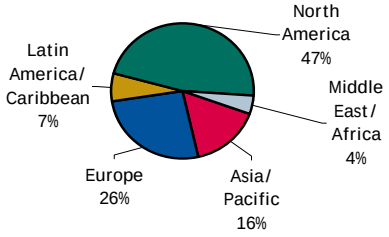
**Global Rating Activity By Broad Market Sector: 2008**

(%)

| | Global Corporates | | Financial | | Non-Financial | |
|---|---|---|---|---|---|---|
| | Downgrade | Upgrade | Downgrade | Upgrade | Downgrade | Upgrade |
| AAA | 13.64 | NA | 5.56 | NA | 50.00 | NA |
| AA | 21.77 | 0.00 | 22.95 | 0.00 | 16.00 | 0.00 |
| A | 7.95 | 1.81 | 8.98 | 1.37 | 6.29 | 2.52 |
| BBB | 6.38 | 2.55 | 5.08 | 2.94 | 7.38 | 2.25 |
| BB | 15.10 | 6.84 | 19.55 | 4.51 | 12.39 | 8.26 |
| B | 10.80 | 5.56 | 11.01 | 1.83 | 10.70 | 7.44 |
| CCC to C | 26.09 | 8.70 | 25.00 | 12.50 | 26.67 | 6.67 |

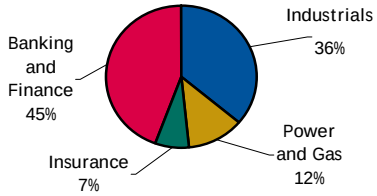
NA – Not applicable.
Source: Fitch.

**Fitch Global Corporate Finance Ratings Distribution by Region — 2008**




Source: Fitch.

**Fitch Global Corporate Finance Ratings Distribution by Sector — 2008**




Source: Fitch.

The 'AA' and 'A' rating categories observed downgrade rates of 21.8% and 8.0%, respectively, in 2008. The 21.8%, due almost entirely to the severe credit erosion in the financial sector, was the highest percentage recorded by Fitch in nearly two decades at the 'AA' level. In contrast, issuers at the lowest investment-grade rating category — 'BBB' — were downgraded at a rate of 6.4% in 2008. Clearly, the surge in downgrades in the financial sector in 2008 had a strong disproportionate effect on the top rating categories where most financial ratings reside. At the beginning of 2008, 68% of Fitch's outstanding ratings, for example, 'AAA', 'AA', and 'A', consisted of financial entities and 32% of industrial companies.

Speculative-grade credits typically experience more volatile rating activity during economic highs and lows. For 2008, speculative-grade issuers, at the major rating categories, witnessed a surge in downgrade activity year-over-year. Issuers rated 'BB' in 2008 registered a downgrade rate of 15.1%, while for the 'B' category, a rate of 10.8% was recorded. The combined 'CCC' to 'C' category posted a downgrade rate of 26.1%, essentially consisting of transition to default, a pronounced increase from the 6.9% recorded one year earlier.

**Fitch Global Corporate Finance Average Annual Transition Rates: 1990–2008**

(%)

| | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|---|---|---|---|---|---|---|---|---|---|
| AAA | 94.90 | 5.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.08 | 91.65 | 7.84 | 0.35 | 0.02 | 0.02 | 0.00 | 0.04 | 100.00 |
| A | 0.02 | 2.34 | 92.48 | 4.73 | 0.21 | 0.07 | 0.06 | 0.09 | 100.00 |
| BBB | 0.00 | 0.24 | 4.29 | 90.70 | 3.71 | 0.53 | 0.24 | 0.28 | 100.00 |
| BB | 0.03 | 0.06 | 0.16 | 8.53 | 80.63 | 7.20 | 1.83 | 1.55 | 100.00 |
| B | 0.00 | 0.00 | 0.26 | 0.72 | 10.62 | 82.07 | 4.34 | 1.99 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.27 | 1.08 | 19.46 | 54.59 | 24.59 | 100.00 |

Source: Fitch.

**Global Rating Activity By Broad Market Sector: 1990–2008**

(%)

| | Global Corporates | | Financial | | Non-Financial | |
|---|---|---|---|---|---|---|
| | Downgrade | Upgrade | Downgrade | Upgrade | Downgrade | Upgrade |
| AAA | 5.10 | NA | 4.33 | NA | 7.07 | NA |
| AA | 8.27 | 0.08 | 7.04 | 0.11 | 11.75 | 0.00 |
| A | 5.16 | 2.36 | 3.68 | 3.41 | 7.26 | 0.87 |
| BBB | 4.77 | 4.53 | 3.58 | 6.64 | 5.54 | 3.15 |
| BB | 10.58 | 8.78 | 12.05 | 10.42 | 9.86 | 7.98 |
| B | 6.33 | 11.59 | 5.61 | 12.86 | 6.76 | 10.84 |
| CCC to C | 24.59 | 20.81 | 18.30 | 28.10 | 29.03 | 15.67 |

NA – Not applicable.
Source: Fitch.

Examining upgrades within the investment-grade rating categories, all weakened year-over-year but by a more modest amount relative to the sharp changes recorded among downgrades year-over-year. Not surprisingly, there were no upgrades at the 'AA' level mirroring 2007 data. Rating categories 'A' and 'BBB' ended the year with moderate upgrade rates of 1.8% and 2.6%, respectively, compared with 2.0% and 4.0%, respectively, in 2007. Speculative-grade issuers experienced more significant changes in upgrade rates within the 'BB' (6.8%) and 'B' (5.6%) categories, both down nearly five percentage points from year earlier levels. Issuers at the lowest end of the rating scale, 'CCC' to 'C', registered few upgrades, resulting in a rate of 8.7%, down three-fold from the 27.6% recorded a year earlier.

**Fitch Global Corporate Finance Issuer Default Rates**

(1990–2008)

| | Number of Fitch-Rated Defaults | Default Rate (%) |
|---|---|---|
| 1990 | 6 | 1.38 |
| 1991 | 10 | 1.86 |
| 1992 | 4 | 0.64 |
| 1993 | 0 | 0.00 |
| 1994 | 0 | 0.00 |
| 1995 | 1 | 0.11 |
| 1996 | 2 | 0.20 |
| 1997 | 1 | 0.09 |
| 1998 | 6 | 0.43 |
| 1999 | 13 | 0.81 |
| 2000 | 8 | 0.44 |
| 2001 | 19 | 0.86 |
| 2002 | 47 | 2.15 |
| 2003 | 25 | 1.08 |
| 2004 | 3 | 0.12 |
| 2005 | 8 | 0.31 |
| 2006 | 2 | 0.07 |
| 2007 | 3 | 0.11 |
| 2008 | 37 | 1.29 |

Note: Data enhancement efforts may lead to slightly different results than previously published. Current study supersedes all prior statistics.
Source: Fitch.

Briefly examining the migration data by major sector revealed that both the financial and non-financial sector rating activity was net negative on the year at each rating category. The investment-grade rating categories suffered from financial sector downgrades, especially at the 'AA' and 'A' levels, while non-financial negative rating movements had a considerable impact on results for ratings 'BBB' and below.

Comparing the 2008 data to average annual historical results for the 1990–2007 period illustrates that credit quality weakened considerably in the most recent year. Downgrades were significantly higher and upgrades were much lower than the historic averages. In fact, the category with the most significant difference compared with the historic one-year average data again was 'AA' with 78.2% of issuers unchanged in 2008, compared with an average annual stability rate of 92.5% for the 1990–2007 period. Again, banking and finance issuers contributed heavily to the 2008 high investment-grade downgrades statistics.

Examining the average annual data including 2008 (1990–2008) shows that issuers rated investment-grade exhibit far more stability than speculative-grade level issuers even including times of great economic and credit stress. Each incremental move down the rating scale displays increased negative volatility, atop 'AAA' (5.1%) and 'A' (5.2%) rating categories down through the speculative-grade categories of 'BB' (10.6%) to 'CCC' to 'C' (24.6%).

## Defaults Multiply with Global Credit and Economic Crisis

Fitch-rated defaults totaled 37 in 2008, a sizable increase given that only three were observed in 2007. As a result, Fitch recorded an increase in its annual issuer default rate to 1.29%, up from only 0.11% in 2007.

In one respect or another, the global credit crisis played a central part in these defaults. Either directly related to severe real estate-related investment losses that depleted bank capital, or to the effects of highly risk-averse credit markets, which cutoff critical funding for low-rated speculative-grade issuers, or to the precipitous drop in

consumer and business spending that contributed to contracting profits and rising unemployment.

Financial institutions (including insurance) dominated the Fitch-rated defaulters in 2008, accounting for more than half, and of the financial institutions, half were located in the U.S., the epicenter of the credit crisis. The remaining financial institution credits were divided between Europe and Asia/Pacific. Financial institutions accounted for all but one of the investment-grade defaults during the year. Among those defaults included the largest U.S. corporate default in history, brokerage house Lehman Brothers Holdings, Inc., which had far-reaching repercussions throughout the financial markets. Other defaults included the distressed debt exchange of consumer financial giant GMAC LLC (and subsidiaries), while three major Icelandic banks, including Landsbanki Islands, came under state administration, the result of financial stress and heightened risk to the country's overall creditworthiness.

**Fitch Global Corporate Finance Average Cumulative Default Rates: 1990–2008**

(%)

| | One-Year | Two-Year | Three-Year | Four-Year | Five-Year |
|---|---|---|---|---|---|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.04 | 0.00 | 0.00 | 0.02 | 0.05 |
| A | 0.09 | 0.22 | 0.34 | 0.44 | 0.62 |
| BBB | 0.26 | 0.77 | 1.42 | 2.16 | 2.86 |
| BB | 1.42 | 3.32 | 4.94 | 6.43 | 8.22 |
| B | 1.83 | 3.76 | 5.68 | 7.54 | 9.20 |
| CCC to C | 22.30 | 27.59 | 30.64 | 33.33 | 36.92 |
| Investment Grade | 0.14 | 0.35 | 0.61 | 0.89 | 1.16 |
| High Yield | 2.99 | 5.22 | 7.16 | 8.92 | 10.81 |
| All Corporates | 0.68 | 1.25 | 1.77 | 2.24 | 2.73 |

Source: Fitch.

As for non-financial issuers, of the industrial and power and gas credits that defaulted in 2008, the majority originated in the U.S., or 73%. Additionally, all non-financial defaults were speculative-grade at the beginning of the year prior to default, except one, Mexican food retailer Controladora Comercial Mexicana, S.A. de C.V (rated 'BBB–'). Several issuers missed interest payments and regained footing while others succumbed to bankruptcy as business conditions continued to worsen. Familiar names populated the list of 2008 defaults, including Irish crystal and chinamaker Waterford Wedgewood Plc, publisher Tribune Inc., and retailer Linens 'n Things, Inc.

The long-term average annual default rate for Fitch-rated corporate issuers increased to 0.68% through 2008. A marked increase in the average annual default rates at the 'AA' and 'A' categories were the result of financial sector defaults by Lehman Brothers, rated 'AA–', and Icelandic banks, rated 'A', as well as Washington Mutual Inc., rated 'A–', at the beginning of 2008. Therefore, the resulting average annual 'AA' default rate for the 1990–2008 period increased to 0.04% from zero over the 1990–2007 period, while the 'A' moved up to 0.09% through 2008 from 0.03% over 1990–2007. Of note, over the 19-year period from 1990–2008, Fitch recorded two 'AA–', three 'A', and six 'A–' defaults (rated 'AA–', 'A', and 'A–' at the beginning of the year in which they ultimately defaulted).

The complete series of default rates from the one- to five-year periods at the major rating categories is available in the Fitch Global Corporate Finance Average Cumulative Default Rates: 1990–2008 table on page 8. As shown, the probability of default increases considerably with each incremental movement down the rating scale but, in particular, when the movement coincides with a shift from investment-grade to speculative grade. The relationship between Fitch's ratings and default risk remained strong, as the average annual default rate for Fitch's global investment-grade corporate ratings, for instance, was 0.14% over the 1990–2008 period, while across Fitch's global speculative-grade ratings over the same period was 2.99%.

As mentioned in prior studies, it is worth noting with respect to the historical default frequencies displayed in the Average Cumulative Default Rates table on page 8, default rates at the 'B' level, for example, appear modest relative to data reported by other sources. This is due to Fitch's historically more limited coverage of the speculative-grade market. Fitch expects this anomaly will continue to dissipate as both sample sizes and observation years continue to grow. For a detailed description of the methodology used to calculate Fitch's default rates, please see the Fitch Transition and Default Methodology section below.

## Fitch Transition and Default Methodology

All Fitch global, publicly rated, corporate finance long-term debt issuer ratings from 1990 to the present are included in Fitch's transition and default statistics. Fitch employs a static pool approach in calculating default and transition data. The static pools or, alternatively, cohorts, are created by grouping issuer ratings according to the year in which the ratings are active and outstanding at the beginning of the year. For example, issuers with ratings outstanding at the beginning of 1990 constitute the 1990 static pool or cohort, with the same true for the 1991, 1992 and additional cohorts. Issuers newly rated by Fitch in any given year are included in the following year's cohort. For example, the performance of ratings initiated in mid-1995 would be followed as part of the 1996 and future cohorts. Ratings withdrawn midyear are excluded from subsequent cohorts since they are no longer active, but they are monitored for defaults. Defaults on withdrawn ratings are included in Fitch's average annual and multi-year default statistics.

Fitch's continuing data enhancement efforts may result in slightly different statistics than in previously published studies. Therefore, this most recent study supersedes all prior versions. In addition, comparisons with earlier Fitch corporate finance transition and default studies should be viewed within the context of the differing methodologies, whether rating movements were analyzed across the broad rating categories or at both the modifier and flat levels.

### Parameters of the Fitch Corporate Issuer Default Rate

- Statistical data captured in this study is based on the long-term IDR, where assigned, or historically, the long-term issuer rating (a proxy of default risk). For those issuers not assigned an issuer-level rating historically, an algorithm was used to derive an IDR proxy from the outstanding rated debt at year end.
- Fitch worldwide publicly rated corporate finance IDRs and long-term issuer ratings encompassing industrials, utilities, insurance, banks and finance companies. This includes Fitch-rated parent companies and their subsidiaries where the subsidiaries have outstanding debt or securities rated by Fitch.
- Structured finance, municipal, private placement and sovereign ratings were excluded from the study.
- Short-term issuer and debt ratings were also excluded from the study.
- The restrictive default (RD) rating is a default and counted as such.
- One-year default rates were calculated by dividing the number of defaulted issuers by the number of outstanding rated issuers at the beginning of each respective year.

## Transition Rates

In order to calculate one-year transition rates, Fitch examines the performance of ratings outstanding at the beginning and end of a calendar year. Withdrawn ratings are excluded from the transition table calculations since they do not fit this criteria, namely the ratings must be outstanding over a full year or over the full period under observation.

Issuer ratings may reside in multiple static pools, as long as their ratings are outstanding at the beginning and end of the year or multiple-year horizons under observation. For example, the annual performance of an issuer rating initiated in 1994, and therefore outstanding at the beginning of 1995, and withdrawn in 1999, would be included in the 1995, 1996, 1997 and 1998 static pools. The rating's performance over multiple-year horizons would also be included in the two-year, three-year and four-year transition rates for each of the cohorts noted but excluded from five-year transition rates since the rating

was withdrawn in year five and was not outstanding for five full years as part of any cohort. (In other words, as part of the 1995 cohort, this rating's performance would be monitored over a one-year period, 1995; two-year period, 1995–1996; three-year period, 1995–1997; and four-year period, 1995–1998.) In all, Fitch's transition data contain 19 static pools or cohorts from 1990–2008, allowing for 19 unique one-year transition rates, 18 two-year transition rates, 17 three-year transition rates and so on.

The occurrence and timing of both rating upgrades and downgrades for corporate issuers can be attributed to changes in qualitative and/or quantitative factors. Both qualitative and quantitative measures are used to assess the business and financial risks of corporate issuers. Qualitative analysis includes examining industry risk, operating environment, market position, management and accounting policies. In contrast, the quantitative aspect of Fitch's corporate ratings focuses on a company's policies in relation to operating strategies, acquisitions and divestitures, leverage targets, dividend policy and financial goals. An important component in the analysis is the company's ability to generate cash, which is reflected by the ratios that measure profitability and coverage on a cash flow basis.

The rating transitions outlined in this study represent a distinct historical period and may not represent future rating migration patterns. Transition rates are influenced by a number of factors, including macroeconomic variables, credit conditions and corporate strategy. It is useful to examine the performance of Fitch's ratings on a relative scale within each rating category. In addition, it is important to point out that while transition matrices are presented at both the modifier and flat levels in this study, all other statistical analysis was conducted at the modifier level, unless noted otherwise.

**Fitch's Definition of Default**

Fitch defines a default as one of the following:

- Failure of an obligor to make timely payment of principal and/or interest under contractual terms of any financial obligation;
- The bankruptcy filing, administration, receivership, liquidation or other winding up or cessation of business of an obligor; or
- The distressed or other coercive exchange of an obligation, where creditors were offered securities with diminished structural or economic terms compared with the existing obligation.

## Default Rates

Fitch's default rates are calculated on an issuer basis, as opposed to dollar amounts. First, defaults are examined by year for each static pool and individual rating category. For example, if 25 issuers defaulted in 2002, and the 2002 static pool consisted of 2000 issuer ratings, the resulting annual default rate for all ratings in 2002 would be 1.3%. If 10 of these defaults consisted of defaults among issuers rated 'BB' at the beginning of the year and the 'BB' cohort at the beginning of the year totaled 500, the 'BB' 2002 default rate would be 2% (10/500).

From these annual default rates, Fitch derives average annual default rates by weighing each cohort's default rates by the number of ratings outstanding in the given cohort relative to the number of total ratings outstanding for all cohorts. In other words, following the example above, the 2002 'BB' annual default rate of 2% might be followed by a 2003 'BB' annual default rate of 1%. A straight average of these two rates would ignore potential differences in the size of the two cohorts. Rather, weighing the results based on the relative number of 'BB' ratings outstanding in 2002 and 2003 gives greater emphasis to the results of the 'BB' cohort with the most observations.

The same technique is used to calculate average default rates over multiple-year horizons. For example, the two-year default rate for the 2002 'BB' rating pool would be averaged with the two-year default rate for the 2003 'BB' rating pool by weighing the default rates by the relative size of each pool.

For instance, any defaults produced by the 2002 'BB' cohort (the static pool) over the two-year time horizon are summed and divided by the number of 'BB' ratings outstanding at the beginning of 2002 to arrive at the simple 2002 two-year cumulative default rate (CDR) for the 'BB' category. If a total of 15 issuers carrying 'BB' ratings at the beginning of 2002 default over the subsequent two years and 250 issuers were rated

'BB' at the beginning of 2002, 6.0% would be the resulting two-year CDR for the 'BB' rating category if 10 issuers defaulted in year one and five in year two. The 2002 two-year 'BB' default rate would then be averaged with the 2003 two-year 'BB' default rate (using the same methodology just described) by weighing the results of the two by the relative number of 'BB' ratings outstanding in 2002 and 2003. This is the general approach for calculating average CDRs over multiple-year horizons.

## Withdrawn Ratings

With regard to withdrawn ratings, all public ratings are included in the static pool data until the ratings are withdrawn and are then excluded from future static pools.

For the purpose of calculating default rates, however, Fitch tracks withdrawn ratings on a continual basis and includes defaults on withdrawn ratings for the cohorts in which the ratings were active and outstanding. For example, a 'BB' issuer's rating is outstanding in 1995 and is withdrawn in 1997. If the issuer defaults in 1999, the default would be included in the 1995 five-year default rate, 1996 four-year default rate and 1997 three-year default rate.

## Appendix 1A: Fitch Global Corporate Finance Average Cumulative Default Rates: 1990–2008

(%, Modifier Level)

| | One-Year | Two-Year | Three-Year | Four-Year | Five-Year |
|---|---|---|---|---|---|
| AAA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AA | 0.00 | 0.00 | 0.00 | 0.07 | 0.14 |
| AA– | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| A+ | 0.00 | 0.14 | 0.22 | 0.24 | 0.31 |
| A | 0.08 | 0.22 | 0.27 | 0.40 | 0.55 |
| A– | 0.18 | 0.30 | 0.55 | 0.71 | 1.03 |
| BBB+ | 0.20 | 0.44 | 0.83 | 1.32 | 1.88 |
| BBB | 0.15 | 0.73 | 1.42 | 2.31 | 2.96 |
| BBB– | 0.52 | 1.26 | 2.20 | 3.08 | 4.06 |
| BB+ | 1.57 | 3.00 | 4.10 | 5.83 | 7.26 |
| BB | 1.20 | 4.09 | 6.53 | 8.12 | 10.48 |
| BB– | 1.45 | 2.95 | 4.43 | 5.52 | 7.27 |
| B+ | 1.39 | 3.41 | 5.05 | 6.69 | 8.02 |
| B | 2.24 | 4.36 | 6.82 | 8.31 | 10.48 |
| B– | 1.93 | 3.56 | 5.26 | 7.84 | 9.32 |
| CCC to C | 22.30 | 27.59 | 30.64 | 33.33 | 36.92 |
| | | | | | |
| Investment Grade | 0.14 | 0.35 | 0.61 | 0.89 | 1.16 |
| High Yield | 2.99 | 5.22 | 7.16 | 8.92 | 10.81 |
| All Corporates | 0.68 | 1.25 | 1.77 | 2.24 | 2.73 |

Source: Fitch.

## Appendix 1B: Fitch Global Corporate Finance Three-Year Default Statistics

(%)

| | AAA | AA | A | BBB | BB | B |
|---|---|---|---|---|---|---|
| **10-Year Average of Three-Year Cumulative Default Rates (CDRs)** | | | | | | |
| 1997–2006 | 0.00 | 0.00 | 0.39 | 1.49 | 5.13 | 6.06 |
| | | | | | | |
| **Most Recent Three-Year Cumulative Default Rates (CDRs)** | | | | | | |
| 2006 | 0.00 | 0.00 | 0.93 | 0.82 | 2.26 | 3.64 |
| 2005 | 0.00 | 0.00 | 0.00 | 0.37 | 0.33 | 1.85 |

Source: Fitch.

## Appendix 2: Fitch Global Corporate Finance Transition Rates Across the Major Rating Categories

(%)

| | AAA | AA | A | BBB | BB | B | CCC to C | D | Total |
|---|---|---|---|---|---|---|---|---|---|
| **One-Year: 2008** | | | | | | | | | |
| AAA | 86.36 | 13.64 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 78.23 | 20.41 | 0.68 | 0.00 | 0.00 | 0.00 | 0.68 | 100.00 |
| A | 0.00 | 1.81 | 90.24 | 7.11 | 0.12 | 0.00 | 0.00 | 0.72 | 100.00 |
| BBB | 0.00 | 0.00 | 2.55 | 91.07 | 4.99 | 0.58 | 0.35 | 0.46 | 100.00 |
| BB | 0.00 | 0.00 | 0.28 | 6.55 | 78.06 | 10.54 | 1.99 | 2.56 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 1.23 | 4.32 | 83.64 | 7.72 | 3.09 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.70 | 65.22 | 26.09 | 100.00 |
| **Average Annual: 1990–2008** | | | | | | | | | |
| AAA | 94.90 | 5.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.08 | 91.65 | 7.84 | 0.35 | 0.02 | 0.02 | 0.00 | 0.04 | 100.00 |
| A | 0.02 | 2.34 | 92.48 | 4.73 | 0.21 | 0.07 | 0.06 | 0.09 | 100.00 |
| BBB | 0.00 | 0.24 | 4.29 | 90.70 | 3.71 | 0.53 | 0.24 | 0.28 | 100.00 |
| BB | 0.03 | 0.06 | 0.16 | 8.53 | 80.63 | 7.20 | 1.83 | 1.55 | 100.00 |
| B | 0.00 | 0.00 | 0.26 | 0.72 | 10.62 | 82.07 | 4.34 | 1.99 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.27 | 1.08 | 19.46 | 54.59 | 24.59 | 100.00 |
| **Average Two-year: 1990–2008** | | | | | | | | | |
| AAA | 90.43 | 9.41 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.16 | 85.03 | 13.98 | 0.72 | 0.12 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.02 | 4.40 | 86.09 | 8.33 | 0.63 | 0.20 | 0.09 | 0.24 | 100.00 |
| BBB | 0.01 | 0.49 | 8.17 | 83.06 | 5.63 | 1.24 | 0.53 | 0.86 | 100.00 |
| BB | 0.04 | 0.20 | 0.51 | 16.19 | 66.56 | 10.26 | 2.26 | 3.98 | 100.00 |
| B | 0.00 | 0.00 | 0.41 | 1.76 | 20.26 | 68.80 | 4.25 | 4.52 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.63 | 1.88 | 35.00 | 30.00 | 32.50 | 100.00 |
| **Average Three-year: 1990–2008** | | | | | | | | | |
| AAA | 85.61 | 13.67 | 0.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.23 | 79.03 | 19.06 | 1.50 | 0.15 | 0.03 | 0.00 | 0.00 | 100.00 |
| A | 0.03 | 6.42 | 80.39 | 11.09 | 1.26 | 0.32 | 0.09 | 0.40 | 100.00 |
| BBB | 0.03 | 0.76 | 11.12 | 77.13 | 6.72 | 1.99 | 0.55 | 1.69 | 100.00 |
| BB | 0.00 | 0.29 | 1.42 | 21.43 | 55.28 | 12.08 | 3.03 | 6.46 | 100.00 |
| B | 0.00 | 0.00 | 0.63 | 3.52 | 26.29 | 58.81 | 3.16 | 7.59 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 1.07 | 5.71 | 39.64 | 15.71 | 37.86 | 100.00 |
| **Average Four-year: 1990–2008** | | | | | | | | | |
| AAA | 80.57 | 16.56 | 2.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.29 | 74.20 | 22.82 | 2.40 | 0.20 | 0.06 | 0.00 | 0.03 | 100.00 |
| A | 0.02 | 8.19 | 75.52 | 13.12 | 2.03 | 0.45 | 0.13 | 0.55 | 100.00 |
| BBB | 0.04 | 0.92 | 13.27 | 72.44 | 7.30 | 2.51 | 0.77 | 2.74 | 100.00 |
| BB | 0.00 | 0.25 | 2.15 | 23.97 | 48.71 | 13.19 | 2.52 | 9.21 | 100.00 |
| B | 0.00 | 0.00 | 0.94 | 6.71 | 28.82 | 50.24 | 2.12 | 11.18 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.43 | 1.29 | 9.05 | 37.93 | 7.76 | 43.53 | 100.00 |
| **Average Five-year: 1990–2008** | | | | | | | | | |
| AAA | 75.24 | 19.58 | 5.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.36 | 69.76 | 26.18 | 3.25 | 0.33 | 0.07 | 0.00 | 0.07 | 100.00 |
| A | 0.02 | 9.73 | 70.72 | 15.29 | 2.46 | 0.83 | 0.15 | 0.81 | 100.00 |
| BBB | 0.03 | 0.98 | 14.51 | 69.09 | 7.89 | 2.77 | 0.85 | 3.88 | 100.00 |
| BB | 0.00 | 0.16 | 2.47 | 25.62 | 44.29 | 12.37 | 2.15 | 12.93 | 100.00 |
| B | 0.00 | 0.00 | 1.38 | 9.68 | 27.65 | 44.70 | 1.84 | 14.75 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.52 | 4.71 | 6.28 | 35.60 | 2.62 | 50.26 | 100.00 |

Source: Fitch.

## Appendix 3: Fitch Global Corporate Finance Transition Rates at the Modifier Level

(%)

| | AAA | AA+ | AA | AA– | A+ | A | A– | BBB+ | BBB | BBB– | BB+ | BB | BB– | B+ | B | B– | CCC to C | D | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **One-Year: 2008** | | | | | | | | | | | | | | | | | | | |
| AAA | 86.36 | 4.55 | 9.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA+ | 0.00 | 52.00 | 16.00 | 32.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 1.18 | 58.82 | 15.29 | 18.82 | 4.71 | 0.00 | 1.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA– | 0.00 | 0.00 | 0.00 | 76.63 | 15.76 | 4.35 | 1.63 | 0.00 | 0.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.09 | 100.00 |
| A+ | 0.00 | 0.00 | 0.00 | 6.06 | 73.16 | 16.45 | 1.73 | 1.30 | 0.87 | 0.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.00 | 0.00 | 0.00 | 0.35 | 3.50 | 72.03 | 20.28 | 1.75 | 0.00 | 0.70 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.05 | 100.00 |
| A– | 0.00 | 0.00 | 0.00 | 0.00 | 0.32 | 3.51 | 80.51 | 13.42 | 1.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.96 | 100.00 |
| BBB+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 | 0.35 | 6.27 | 78.75 | 10.80 | 2.79 | 0.35 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| BBB | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 3.90 | 80.78 | 10.21 | 2.70 | 0.60 | 0.30 | 0.00 | 0.00 | 0.00 | 0.90 | 0.30 | 100.00 |
| BBB– | 0.00 | 0.00 | 0.00 | 0.00 | 0.41 | 0.00 | 0.00 | 0.00 | 8.68 | 75.62 | 7.02 | 2.89 | 2.07 | 0.41 | 1.65 | 0.00 | 0.00 | 1.24 | 100.00 |
| BB+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.40 | 15.20 | 61.60 | 8.00 | 2.40 | 0.80 | 0.00 | 0.80 | 1.60 | 7.20 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.87 | 0.00 | 0.00 | 4.35 | 74.78 | 7.83 | 6.09 | 0.87 | 2.61 | 2.61 | 0.00 | 100.00 |
| BB– | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.00 | 0.00 | 0.00 | 1.80 | 15.32 | 58.56 | 14.41 | 3.60 | 3.60 | 1.80 | 0.00 | 100.00 |
| B+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.93 | 2.78 | 0.93 | 5.56 | 4.63 | 61.11 | 17.59 | 4.63 | 0.93 | 0.93 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.78 | 5.47 | 69.53 | 9.38 | 10.16 | 4.69 | 100.00 |
| B– | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.14 | 0.00 | 0.00 | 2.27 | 6.82 | 73.86 | 12.50 | 3.41 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.70 | 65.22 | 26.09 | 100.00 |
| **Average Annual: 1990–2008** | | | | | | | | | | | | | | | | | | | |
| AAA | 94.90 | 2.55 | 1.98 | 0.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA+ | 0.48 | 82.29 | 13.04 | 3.54 | 0.16 | 0.16 | 0.16 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA | 0.00 | 2.62 | 80.45 | 11.18 | 4.31 | 0.69 | 0.19 | 0.25 | 0.00 | 0.25 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| AA– | 0.04 | 0.04 | 3.58 | 84.74 | 8.45 | 2.17 | 0.57 | 0.15 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.08 | 100.00 |
| A+ | 0.00 | 0.10 | 0.46 | 5.25 | 83.16 | 8.42 | 1.55 | 0.43 | 0.43 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.00 |
| A | 0.05 | 0.00 | 0.26 | 1.00 | 5.87 | 81.61 | 7.82 | 1.84 | 0.76 | 0.21 | 0.18 | 0.11 | 0.03 | 0.03 | 0.11 | 0.00 | 0.05 | 0.08 | 100.00 |
| A– | 0.00 | 0.00 | 0.12 | 0.22 | 0.96 | 7.34 | 80.25 | 8.40 | 1.40 | 0.65 | 0.12 | 0.16 | 0.00 | 0.03 | 0.00 | 0.03 | 0.12 | 0.19 | 100.00 |
| BBB+ | 0.00 | 0.00 | 0.03 | 0.24 | 0.52 | 1.15 | 8.13 | 77.28 | 8.90 | 1.77 | 0.69 | 0.24 | 0.42 | 0.14 | 0.03 | 0.00 | 0.24 | 0.21 | 100.00 |
| BBB | 0.00 | 0.00 | 0.09 | 0.13 | 0.06 | 0.44 | 1.32 | 8.01 | 80.84 | 5.53 | 1.16 | 1.04 | 0.38 | 0.28 | 0.22 | 0.06 | 0.28 | 0.16 | 100.00 |
| BBB– | 0.00 | 0.05 | 0.05 | 0.14 | 0.23 | 0.18 | 0.23 | 1.42 | 11.12 | 76.43 | 5.17 | 2.15 | 1.14 | 0.46 | 0.46 | 0.05 | 0.18 | 0.55 | 100.00 |
| BB+ | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 0.77 | 2.83 | 14.91 | 68.21 | 5.23 | 1.71 | 1.11 | 1.54 | 0.43 | 1.11 | 1.71 | 100.00 |
| BB | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.40 | 0.71 | 2.53 | 10.93 | 68.42 | 6.68 | 2.33 | 2.43 | 1.92 | 2.23 | 1.32 | 100.00 |
| BB– | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.59 | 1.09 | 4.06 | 10.89 | 66.73 | 5.74 | 5.15 | 1.58 | 2.28 | 1.58 | 100.00 |
| B+ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.27 | 0.68 | 0.68 | 4.50 | 16.35 | 63.08 | 7.77 | 2.32 | 2.59 | 1.50 | 100.00 |
| B | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 | 0.15 | 0.46 | 0.92 | 4.31 | 15.56 | 65.33 | 6.32 | 4.31 | 2.47 | 100.00 |
| B– | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.17 | 0.00 | 0.35 | 0.35 | 0.35 | 0.52 | 1.39 | 3.83 | 13.04 | 70.78 | 6.61 | 2.09 | 100.00 |
| CCC to C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.54 | 0.27 | 0.27 | 0.54 | 3.78 | 15.14 | 54.59 | 24.59 | 100.00 |

Source: Fitch.

## Appendix 4: Fitch-Rated Defaults 2008[a]

| Issuer Name | Rating at Beginning of Year | Industry Sector | Country |
|---|---|---|---|
| **2008** | | | |
| Controladora Comercial Mexicana, S.A. de C.V.(CCM) | BBB– | Industrials | Mexico |
| Corporacion Durango, S.A. de C.V. | B | Industrials | Mexico |
| Cymbis Finance Australia Limited | B | Banking and Finance | Australia |
| Education Resources Institute, Inc. (The) (TERI) | A– | Insurance | United States |
| Fremont General Corporation | CC | Banking and Finance | United States |
| General Motors Acceptance Corp. of Canada Limited | BB+ | Banking and Finance | Canada |
| Glitnir Banki (Formerly known as Islandsbanki) | A | Banking and Finance | Iceland |
| GMAC Bank GmbH | BB+ | Banking and Finance | Germany |
| GMAC International Finance B.V. | BB+ | Banking and Finance | Netherlands |
| GMAC LLC | BB+ | Banking and Finance | United States |
| Hanover Finance Limited | BB+ | Banking and Finance | New Zealand |
| Harrahs Entertainment Inc. | BB+ | Industrials | United States |
| Harrah's Operating Company | BB+ | Industrials | United States |
| Indover Bank | B+ | Banking and Finance | Netherlands |
| IndyMac Bancorp, Inc. | BBB– | Banking and Finance | United States |
| IndyMac Bank, FSB | BBB– | Banking and Finance | United States |
| Kaupthing Bank hf. | A | Banking and Finance | Iceland |
| LandAmerica Financial Group, Inc. | BBB | Insurance | United States |
| Landsbanki Islands | A | Banking and Finance | Iceland |
| Lehman Brothers Holdings Inc. (NY) | AA– | Banking and Finance | United States |
| Lehman Brothers Holdings PLC | AA– | Banking and Finance | United Kingdom |
| Linens 'n Things, Inc. | CCC | Industrials | United States |
| Parex banka | BB+ | Banking and Finance | Latvia |
| Residential Capital, LLC | BB+ | Banking and Finance | United States |
| SemCams Midstream Co. | B | Power and Gas | United States |
| SemCrude, LP | B | Power and Gas | United States |
| SemGroup, L.P. | B | Power and Gas | United States |
| Six Flags Theme Parks, Inc. | B– | Industrials | United States |
| Six Flags, Inc. | B– | Industrials | United States |
| Thornburg Mortgage, Inc. | CCC | Banking and Finance | United States |
| TOUSA, Inc (Technical Olympic USA, Inc.) | C | Industrials | United States |
| Transtel Intermedia S.A. | CCC | Industrials | Colombia |
| Tribune Co. | B– | Industrials | United States |
| Tronox Worldwide/Finance | B | Industrials | United States |
| Washington Mutual Bank | A– | Banking and Finance | United States |
| Washington Mutual, Inc. | A– | Banking and Finance | United States |
| Waterford Wedgwood Plc | CCC | Industrials | Ireland |

[a]Rated by Fitch at the beginning of the year in which they defaulted. Note: Data enhancement efforts may lead to slightly different results than previously published. Current study supersedes all prior statistics.
Source: Fitch.